

ATTACHMENT F

PHOTOGRAPH LOG

Table E-1  
(Continued)

<u>Actual SWMU Number and Name</u>	<u>SWMU - Number and Name Identified in PR</u>
40 and 41. Waste Pickle Liquor Tanks	2. Waste Pickle Liquor Tanks
42. Deep Well Injection System	Not Identified
43. Underground Injection Well	7. Deep Well Injection Facility
44. Waste Pickle Liquor Loading Pad	Not Identified
45. Effluent Lagoon	5. Lagoon
46. Former Sludge Lagoon	4. Sludge Lagoon
47. Former Sludge Drying Beds	12. Old Sludge Land Disposal Unit
48. Sludge Landfill	6. Landfill at Gravel Dump/Quarry
49. Sludge Dozer	Not Identified
50. Former Sludge Spreading Area	Not Identified
51. Kaplan Waste Oil Drum Area	Not Identified
52. Kaplan Burn Area	Not Identified
53. Storm Sewer System	18. Storm Sewer System

Actual AOC

A	Underground Storage Tanks (USTs) at Maintenance Garage (3)	Not identified
B	Diesel Fuel UST	Not identified
C	Electrical Transformer Area	Not identified
D	Above-Ground Farm Fuel Tanks	Not identified
E	Kaplan Gasoline UST	Not identified
F	Kaplan Diesel Fuel UST	Not identified
G	Kaplan Facility Yard	Not identified

Table E-1

<u>Actual SWMU Number and Name</u>		<u>SWMU - Number and Name Identified in PR</u>
1.	Wood Packaging Wastes Trench	8. Earthen Trench for Wood and Non-Special Packaging Wastes
2.	Metal Waste Trench	9. Earthen Trench for Metal Wastes for Reclamation
3 and 4.	Railroad Container Storage Areas	Not Identified
5.	Steel Coil Roll Yard	Not Identified
6.	Bulk Oil Sump	Not Identified
7.	Product Drum Storage Area	Not Identified
8.	Waste Pickle Liquor Holding Tank	24. Pickle Line WAA
9.	Pickle Line Fume Scrubber	17. Pickle Line Fume Scrubber
10.	Oil Mist Eliminator	13. #1 Oil Mist Eliminator Stack
11.	Hydrochloric Acid Product Tanks	Not Identified
12-14.	Empty Drum Storage Areas	Not Identified
15.	Shot Blaster Drum Storage Area	Not Identified
16.	Bag House Drum Storage Area	Not Identified
17.	Shot Blaster Bag House	Not Identified
18.	Dross Tank	30. Galvanizing Line WAA
19.	Car Wash Grease Traps	Not Identified
20.	Industrial Sewer System	Not Identified
21.	Municipal Waste Containers	Not Identified
22 and 23.	River Water Clarifiers Nos. 1 and 2	Not Identified
24.	Primary Mixing Tanks	Not Identified
25.	Primary Settling Tanks	Not Identified
26.	Secondary Mixing Tanks	Not Identified
27 and 28.	Wastewater Flocculator Clarifiers Nos. 1 and 2	10. Clarified Flocculator Tanks(s) Sump(s)
29.	Sludge Thickener	11. Sludge Thickener Sumps(s)
30.	Inlet Flume	Not Identified
31.	Distribution Flume	Not Identified
32.	Waste Oil Tank	1. Waste Oil Tank
33.	Former Waste Oil Incinerator	Not Identified
34.	Sludge Filter System	Not Identified
35.	Sludge Bin	Not Identified
36.	Sludge Roll-Off/Hauler	Not Identified
37.	Sludge Dump Trucks	Not Identified
38.	Sludge Front-End Loader	Not Identified
39.	Waste Pickle Liquor Sump System	3. Waste Pickle Liquor Sump(s)

On August 10, the inspection continued and included M.S. Kaplan, Air Products, Sludge Landfill, farmland property, Industrial Waste Treatment Plant, Effluent Lagoon, Former Sludge Lagoon, and Former Sludge Drying Beds.

During the PR, 33 SWMUs and four AOCs were identified. As a result of the VSI, 16 SWMUs were deleted, 12 SWMUs were renamed, two SWMUs became four, and 34 SWMUs were added. Seven new AOCs were identified subsequent to the VSI and the initial four were deleted. The SWMUs deleted from the list generated during the PR included:

14. Boiler Stack #1
15. Batch Anneal Process Emissions Stacks
16. Batch Anneal Fuel Emissions Stacks
19. Pickle Rinseate Tank(s)
20. Galvanizing Rinseate Tank(s)
21. Chromate Rinseate Tank(s)
22. Air Products WAA
23. Boiler Blowdown WAA
25. Tandem Mill WAA
26. Cold Rolling WAA
27. Batch Anneal WAA
28. Temper Mill WAA
29. Sheet Shearing/Slittering WAA
31. Chromate Coating WAA
32. Incinerator Rinseate Tank
33. Incinerator Rinseate Sump

Table E-1 reviews the SWMUs identified during the PR and the actual SWMUs identified subsequent to the VSI.



## VISUAL SITE INSPECTION (VSI) SUMMARY REPORT

FACILITY: LTV Steel Company  
Hennepin, Illinois

DATE: August 9 and 10, 1989

FACILITY REPRESENTATIVES: Paul Schlingman  
Bob Voytko

INSPECTORS: Greg Terdich, A.T. Kearney  
Lisa B. Axe, A.T. Kearney

WEATHER CONDITIONS: Sunny to partly cloudy, temperature in  
the mid 80's.

The LTV Steel Company has been operating as a processor of steel since 1967. Steel operations involve cold forming, galvanizing, and metal finishing operations. The facility owns approximately 7,000 contiguous acres; however, the plant proper is comprised of approximately 450 acres. LTV employs 750 people over three shifts for 365 days a year. The facility also operates a deep well injection facility and an Industrial Waste Treatment Plant.

The majority of the remaining LTV property is used for farming. Two areas comprising approximately 1 acre are leased by companies that support the LTV operation: M.S. Kaplan Company - a steel recycler located off the LTV rail spur; and Air Products - an atmospheric gas manufacturer.

An initial meeting was held on August 9 from 0900 to 1200 to review what the RCRA facility assessment involves and to discuss the VSI Notification Letter, specifically the information needs list. Subsequently, the Steel Plant, Maintenance Shop, Garage, Cooling Tower, Pump Station, Bulk Oil Building, Substation and Boiler House were inspected.

ATTACHMENT E

VSI SUMMARY REPORT

GNT  
48/48/49

### Waffle Rigger Sump

- Photo 1-37 looks SE and 2-1
- Some minor cracks & 1 corner badly cracked
- approx 9' x 15' in plan
- Steel tanks in background is from phosphat line in plants. Empty, cleaned out & mud in case  $\approx 5$  gal
- Rusty stains on walls & bldgs

gnt

### Waste Oil Tank

- Photo 2-2 looks N.
- Photo 2-3 looks SE
- Old incin base slab immersed N of tank
- Heavy oily staining on walls, gravel, asph & sides & pipes on & around tank
- Also 2 oil stains  $\approx 1$  in  $\times$  approx 10'  $\times$  15' NNW of incin. pad

49/49 46/46  
GNT

### Waste Oil Loading Pad

- on W. side @ SW corner of bldg.
- Used to load tank trucks if deep well shut down
- Core base w/ drain to pickle liquor sump.
- Rusty staining all drain to flooding
- Core pad  $\approx 15' \times 15'$  on soil

### WRAP-UP MTS

- Coating oils are always animal or vegetable w/ the 50 added as needed for pH
- Tank oils are always petroleum

(Covered 1530)

Greg M. Trench

46

- Photo 1-33 look SW @  
sluff filter says.

- Floor drains @ main  
level in WWTP bldg  
goes to waste return  
pump

### Deep Well Injection Sigs

- in W. end of WWTP bldg  
- consists of pumps, filters,  
filter and mixers  
- Filters emptied after each  
injection & sent to thickener

- Photo 1-34 look southwest  
(S) @ injection equip.

- Filters (2) are 2000 gal  
each. Bottomaceous earth  
is filter mat

47 45

### Deep Well

- Photo 1-35 look W.

✓ Pickle liquor (waste) tanks

- Photo 1-36 look East

- 5 ft high

- 7'-8' high contain walls,  
approx 2'-3' below

surrounding grade. Base  
of filter tank on base of 1' belated wall

- Epoxy coating on inside  
partially removed

ports by acid (rusty stains)

- Spalling on base of  
contain slab - pore

from acid spills

- Minor cracks in contain  
walls but no evidence

of leakage through them

- Rusty stains on gravel to  
N, NNE & E of tanks.

Right rusty stains on gravel on  
W. side of wall

NOT

43 44

G.M.T.

- No secondary containment  
at S. Works

- Secondary containment  
around E & W. sides of  
primary tanks & thickener,  
& below E & W. flumes.  
This consists of below  
grade tunnels for pumps  
& pipes, tunnels of concrete  
sides & bottom.

Tunnel continues along  
entire W. side & into  
blow area. Does not  
extend to bottom of  
sloped clarif. bottoms.

Only built up on floors in  
SE area by masonry &  
primary tanks only.

- If flume is for inlet from  
plant to primary & mixers  
only.

45

- Pump rooms located  
under cell 4 clarifier  
below tunnel level to  
pump sludge from  
lowest point @ center  
of each clarifier

- Floor channels in tunnel  
along all tank walls to  
collect & see pump & return  
it to induce WWT system

SLUDGE FILTER SYS.

= In WWT Bldg.

- Sludge into 11 tank where  
sedimentation added, then  
overflows to lower holding  
tank (lager), then to  
sludge filter. Steel  
tanks. Top is 4' x 5' (9 ft),  
bottom is 12, 200 ft.  
All above concrete floor.  
Sludge filter has 3' x 1' x 1' D/K ft.  
convey outside to bin

42

## Pump Room

- Floor drains for ~~tell~~ - cat bleed - off to indus.
- sewer sump below then to indus WWTP sys.

## Sludge Bin

- on E. side of plant
- Now has roll-off
- Conc slab & knee walls metal high walls
- Photo 1-29 look W.C. bin & 2 cemented down bins cement used to fix sludge
- asphalt around bin  $\frac{1}{2}$ " build - up of sludge on asph + in bin is heavier
- Photo 1-30 look S.C. sludge front end loader

43

\* Conc. walls on S, W & N sides of bin (W & N are bldg walls)

## S SIDE OUTDOOR WORKS

- Water carried to all groups thru flume covered by grates along W. side
- Flume conc walls & sides ranges from 2' to deep @ N end to 3' 8" deep @ S end. approx 3' 0" wide @ N end to 4' 0" wide @ S end
- All conc bottom sides some minor cracking observed
- Photo 1-31 look NEQ Thicken 2 clarifiers
- Photo 1-32 look down @ mixers & primary tank.

Photos from top of oil tank

EFFLUENT LAGOON

- approx. 50' E. of Ill. River
- 96" RCP outfall pipe
- 6-7 dams w/ 3'-5' drops  
to aerate water between  
RCP & lagoon over approx  
300 yards, 96" RCP outfall  
on W. side of county Rd.
- 1-26 hook EC cascade
- 1-27 hook SW @ lagoon river
- Lagoon outfall is submerged  
in lagoon river, small  
sheet piled arm w/ soil  
backfill or 12' w x 20' long  
covers outfall in river

INDUS WWT P

- Scattered garbage cans
- 1 dumpster outside
- 2 4-b sinks to indus. sewer
- Indus. Water Clarifiers
- 2 - 1 in service at a given  
time
- 2500 GPM
- Bottom sludge pumped from  
cone bottom & lab. 3 sides
- Water stopped @ old joints
- Minor cracks observed in  
base 3 sides
- Cracks sealed in frag. 3  
not master seen or empty  
one (S. - NE)
- Photo 1-28 hook NE @
- #2 (North) in use now
- #1 empty & dry
- Thru hole along E. edge but not  
other 2nd. - very contain



## 38 S LUDGE LAGOON

- Photo 1-25 look S. @

Lagoon ~~and~~ east

- Immed. across drive  
gravel  
from Drying Bed

## SCATTERED FARMS

- Houses & farm bldgs.  
scattered along roads  
on property

- all houses abandoned &  
some have been removed

- Many out buildings still  
used for farm operations

- Some ground fall tanks  
still in place at many  
of these sites

- No signs of spills or disposal  
from roads as we passed

- Did not enter any of these  
properties

- "Dry Storage" noted on air  
photo was grain bin  
(12 → 1 PM - 2 PM)  
1:15 PM - 5:15 PM

## AIR PRODUCTS

- Change tube oil tank  
- Drummed then hauled off  
site

- Crack anhydrous ammonia  
into Nitrogen & Hydrogen gas

- Catalyst changed very  
slowly - 2 d - 10 years  
sent back to source supplier

- No industrial sewage  
not connected to city's

- Very clean in bldg.

- MSW to H incinerator work

- 1 - MSW dumpster @ bldg



ROAD TO IPCO

- Gravel pit  $\approx 20'$  deep next to road
- 5 other items not discernable due to heavy tree & brush growth within the pit.
- IPCO has fly ash & bottom ash disposal areas on their property

- Substation is small gas pressure reduction station from pipeline to CTV

BARGE LOADING AREA

- Has 55 gal. barrels of kerosene
- 4 TV finished coils loaded here onto barges
- Operated by a contractor

RIVER INTAKE

- 200 FT.  $\pm$  to N. of Barge loading area

SLUDGE DRYING AREA

- Photo 1 - 2A looks NW SAT
- Drying beds near & part within trees area. Note outfall pipe from sludge lagoon to drying beds
- Disposal & experimental area in open grass area to E. of drying beds

# APPARENT HORIZ. TANK @ GRAV. PIT

- in E. portion of property to SE of LTV's spur to main line
- Road to pit was fenced off
- Tried to access on foot from N. along RR tracks but couldn't get through woods & identify pit.
- Abandoned search
- Did this between Kaplan's Landfill

## TRAILS

- Drove from landfill to trails along abandoned Milwaukee RR R.O.W.
- Observed E. portion of trails on steep slope to West of R.O.W. appeared to be dirt like trails.

# ESK

- EXOLON-ESK CO.
- Make Silicon carbide for keeping silica sand & sand suggesting electrodes to "cook" sand. Conco piles w/ large tarps
- Steel stacks & conveyor equip & other bldgs & equip on site
- Strong pungent sulfur odor to N. of this plant

3-

sludge press on 8-8-89  
to see if more effective.  
Wagon hauls rolloffs

- Sludge deposited near  
working face on West  
side of landfill

- Dyer then spreads it  
to working face & pushes  
it over the edge & cascade  
at different levels on working face  
- Gravel placed over finished  
grade for trafficability

- SE corner is filled to edge  
of area & standing approx  
30'-40' tall

- Photo 1-20 looking  
SE @ filled area & dumping  
area

- Photo 1-21 NE open  
landfill area from edge of top  
working face

-3

- Photo 1-22 look E @ open  
area (remaining landfill)  
space & beyond from  
top of working face

- Photo 1-23 look N @  
sludge dayer

- Today's sludge was quite  
wet & fluid & more wet  
than normal. It may be  
visible in Photo 1-20

↑  
2

- Photo 1-19 Cook 2.

② Burning area  
• Burning paper & wood  
trash

- 3 empty gear luber drums to W.
- of boiler in scrap steel area. No plans to re-use or dispose of.
- Scrap steel piles for Vapors used in repair of equip in 3 places

- Oil stains on soil near  
crap piles in gravel  
along road

- Feathering to  $\pm$  3 W x 12' L x 3' D  
unmud. S. of Bailer had  
 $\approx 1-1\frac{1}{2}$  FT. of standing  
water + a ~~few~~ <sup>few</sup> pieces of scrap steel.  
Water is a combination of  
rain + cooling water for bailer.  
Water was dil colored, appar-  
ently from soil mixing in.  
No evidence of oil, kerosene  
or other pollutants other.

SUDSE LAND ELL

- Gravel pit excavated for fill for Ill Power Co. Plant nearby
- Started filling in 1974
- Used end loader to fill dump truck @ WWTP which hauled sludge here. F.E.M.E.R Trucking. Started using roll off dump trucks under

28 8-10-89

- MORNING MEETING - 9AM  
PAULS, BOB V, LISA A.,  
GRACE T.

- DOLPHIN CHEM CO.  
140 SOLVENT
- USED FOR GEN. MAINT. &  
REPAIR CLEANUP
- V. Seldom used on steel  
coils
- Most evap., some goes  
to floor then into sewer.  
Paper bags to MSW trash.
- Gen. MSW refuse to  
Peru Municipal landfill  
by Weyrich
- Incin into operation in  
1972, used  $\approx$  2 years,  
dismantled in 1982

29

## SITE VISIT (9AM)

M.S. KAPLAN CO.

(STEEL RECYCLER)

- LARRY DABLER - Plant Mgr.
- Waste oil from diesel crankcase  
stored in 2-30 gal drums
- Employee takes home w/ him
- Empty gas lubrication gets  
rinsed w/ unknown solvent -  
non flammable - from motor
- rinsed to used oil barrel
- 1-1000 gal VST for diesel
- 1-500 gal VST for gasoline -  
out of service 3 years
- Tank registered w/ ~~EGW~~  
Fire Marshall
- Photo 1-18 book EGW Waste  
oil drums, VST's etc.

26

- Has 2 trash cans
- 1-55 gal drum of Naptha used to clean pump motors & evaporated.
- No wastes generated & stored or disposed

### BULK OIL BLDG.

- Receiver tanker truck & drum shipments of lube oil

- Photo 1-16 looking W. @ SE corner of bldg. at oil inlet valves. Drip sump under valves has oil spill & drains to another sump in basement of bldg., then into indus. sewer sys. Main storm on asphalt around sump also from connect/disconnect hoses. Sump of conc.  $\pm 3' \times 4' \times 1$  deep.

27

### DRUM STORAGE AREA

- ~~East~~ 6 MT West ~~East~~ Cooling Tower on asphalt pmt.
- Photo 1-17 looking N. from S. edge of pmt.
- Note heavy "hazy" stain in foreground.
- also black oily stain between drum rows
- Bld drums in foreground unmarked but had tank-like substance on some
- Blue & Red are lube oil product
- Bld in background are caustic soda product
- No evidence of staining here and black top
- Gravel berm made to W. of asphalt to prevent some area to prevent spill travel



24.

Calcedonia Office @ 1600 -  
Ann Anderson left note that  
Chuck will be concerned and  
that the two tenants should  
be inspected; Kaplan and  
Car Products.

### BOILER HOUSE

- Has emission stacks for  
natural gas fired boilers

- RIVER WATER FILTERS &  
SOFTENERS FOR INDUS.  
PROCESS WATERS

- 2 Brine tanks outside on E side  
below grade for water  
softeners. Conc. walls &  
base.  $\approx 5' \times 10' \times 5'$

- Floor drains inside collect brine  
water from softeners & filters  
& direct it to indus. sewer  
sys.

25.

- Air compressors use Cude oil  
but seldom changed. Dumped  
into indus. sewer system  
when it happens.  
- Inside of bldg. very clean.

### SUBSTATION

- S of Boiler House  
- Transformers contain PCB  
oils  
- No evidence of leaks or  
stains

### REGULATING WATER PUMP HOUSE

- S of ~~Substation~~ <sup>East</sup> Bulk Oil Bldg.  
- water used for non-contact  
cooling water & goes through  
plants & cooling tower to S.  
of this bldg.

Temping  
 Oil stored  
 private  
 25

Expenses ~ 20 empty drol  
Stored

# (-) 19 Enantiomer of Aromas  
Name: (-)-20

but Campfires scattered throughout  
plant.

ANALYSTS

Pumping is done of steel scrap  
 & brass for recycling - not  
 to Kappalam  
 - Floor drains to induce sewer

- several larger bags coming for paper waste to gen. MSW refuse
- No solvents seen

# Mobile Equip. Group

#115 spread collection areas  
first view — two collection  
units were 4 diameter  
dug — balled

National Post Services  
Concrete and work  
calculation

grat NW - Roadcut to  
stomach -  
Went of to work out - grasshopper



2 trash bins + 2 recycling outside.

#1-10 HCl product fairly  
brady and Smith view  
standing on gravel

West of Borden full rearing area

[illegible]

Shot blast goes back to  
N.T. Huddock - and  
is recorded

big amount from sand  
beaching rocks

# 1-11 North View of - ~~2~~ 11  
crucifix - shot black -

# 1-12 Smith venders Bay  
House for send Blatz  
(Highly combustible & explosive  
dust) & empty & vays down  
85 cals

#1-13 westport Sanitation transfer  
2-15-07 13  
currently being used  
as a special  
fuel  
(only) station

25 dumpst / recd of

1/18/03

Dumpster in pickle line

Within the pickle and old olive  
where old sewer line remaining

#1-4 West view of old line where  
oil separator remains

Six dumpsters in front of house

#1-5 East view of house  
young oil draining to pits  
in 1' deep water container

#1-6 East view of waste pickle  
liquor stand

50,000 gallon capacity  
oil separator  
strainer line

anoxic and acid production drain  
Sept

#1-7 West view of pickle

1/28/03

scrubber pump stack  
open chimney

Stein & paddle in area

Maintain equipment phones  
5.4070 #1

Addressed Sanitary/Barrel  
waste

Between pickle stander mill  
in 50 empty used drums of  
waste on display on flammable  
liquid at building  
#1-8 - 50 drums used - empty 5 now  
Tandem mill / scrubber pump  
connected to drums  
centrifuge

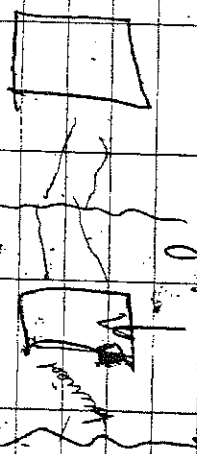
#1-9 North view of Tandem mill  
air stack exhaust blower  
(oil mist eliminator)

5 rows of dumpsters

North of building adjacent to  
outside of tandem mill / where  
accumulation area - no staining

1602

the two garden hoses  
trash cyclor  
rds 5-6' high



metal to  
waste  
can trench

some staining today at  
unpaved drum surfaced  
some what

#1-18 view of trench for  
packaging material

#1-2 view of metal bag  
within trench

Back oil in Sgal oil  
wall corner

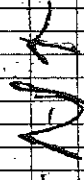
1708

9 drums  
with skins  
empty



centrally built  
for oiling  
sewage  
on the  
tracks

10 5 gallon pails  
of used (but appears  
to be empty)



#1-3 view of drums  
fully string

UTV handles and gear  
maintenance

roll-off dumpster stored  
for hands used to hold  
oil together and beated  
along at track

2071

See H

(2) Primary level 80' x 15' x 24'

2. Primary Agrostis	26' x 10'	24'
---------------------	-----------	-----

2 sec. 10' 20' x 20 x 2.4'

Dr. 1 sent 30,000 carbon sheets 4/11  
no 50A

405A

HCl	rubber lined
-----	--------------

[illegible]

Concrete slab & soft axes

St. Hingoot (St. Herig)

Draws over 80 gals/min. once  
a week for 48 hours.

awake for 48 hours

-Takes a week to full and  
blend.

End

27,000,000 cals/year

cropped every 4 ft

daily leaves etc.!

(3) in order to

10

26 days a year - 3 shifts  
per day

Merley

5

750-800 people are employed  
at the cement plant. —  
Stronger 600 people —

Ar products also not have an

Ans. ER, REC, ID, NO; Key

do not generalize beyond

acute.

Kaplan! also das Wort Kaplan

C.S. 2004 20 No.

Morning meet

1. Energy

Bob Voigt & Co. Env.-Control

3000 US\$

Glenn Kud 44127

(216) 429-26539

1200 morning meeting ended -

6-20-20 Facility but began

starting at the income tax

red / stage. one

$\frac{1}{2} \times 10^6$

mail @ols

2500

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

<p>Product <u>Subs.</u> <u>Product</u></p>	<p>Product <u>Subs.</u> <u>Product</u></p>
--	--

1206

hopen as well as WTL and  
Older generation began in  
end of 67, beginning of 68

Lapin & Air Products → lease  
properties.

Prior to 1967 the land was  
made up of farmland and  
residents

ESK located Visitation carbide  
T1 Power - runs pines north  
& fly ash dumps north

~~1967~~ 12/10/68 1967-1968

Removed industrial USTs  
gas & diesel & replaced w/  
one fiber glass, gasoline  
10,000 gal.

Leak detected in diesel or  
fiber glass, double wall  
found 10,000 gal

1969  
Fiber glass diesel tanks  
removed 10,000 gallons

1307

USTs added 40,000 gal  
gasoline 20,000 gal  
handled per year

Solvents used in Tensar mat  
& maintenance area  
500 maintenance

Tensar hull used to clean  
in operation & evaporator  
C7-7

Wash parts throughout facility  
to clean & is subsequently  
dumped to sewer

Remed well around tank

Thinner water treated through  
pre 11 to WTP thickener

Floculators 80' x 80' x 24'

Thickener 80' x 80' x 24'



10/26

Sludge lagoon 68-74  
300' x 150' x 15'  
Sludge dry beds (2) 1-2 years  
before 74  
50' x 50' x 6"  
Under drain to sludge lagoon  
no clay  
Sludge lagoon — membrane  
plastic lining metamorph  
sand base.

Carroll quarry gone pit  
place in excavated area  
5.14 acres 75 to 80' deep  
unlined

In Agriculture area build  
Sludge inorganic zones  
before 1974 — n72

↑  
University of IL worked w/ CTV  
on the project

11/28

Summit  
8 x 9 — one used for  
scraps steel for techs storage  
— wood & boxes — to  
Sanitary landfill  
75' x 150' x 15"  
one was ~~filled~~ bermed  
along inter hillside  
the other is open & snakes  
herd 5 miles  
and 1980-1982

never built only trench

Sludge lagoon is about 45  
as excavated, sent to  
a contractor — put it  
on site for distance good depth to  
Sludge lagoon bed 5' x 11'  
exist 6'

— Waste adds bed over bed  
yard for dust suppression  
16' 1983

2633' x 250'  
may have waste pinnings

8 of

where FeCl is added as a secondary coagulant and lime for pH and as a disinfectant. The lime is a polymer is added (Calgon poly E2026) waste 23% HCl Pickle liquor 20% FeCl<sub>3</sub> 2 product storage tanks lime & polymer

flowed to one of two flocculation basins settle to base (acne tanks) effluent to storm sewer then to outfall lagoon discharge 001A → river. Flows to thicker settling tank where sludge drops and is pumped to filter press overflow to basement of treatment. Lagoon to river underflow to river to trap lagoon etc.

Plant 5 hrs / River < 500' 907  
WTP 520' ~480-490

into lagoon submerged under-  
flow to river. When water  
flows over into lagoon  
usually only 100' x 300'  
filter press lagoon 10' x 300'  
except part 10' x 300'  
left - almost empty  
manually checked  
lagoon mixed at same  
elevation.  
Plate & Frame Filter  
series of plates 2" thick  
40 per plates pressure  
through membrane  
effluent to beginning of  
sludge dewatering 20  
landfill at NE part of  
plant 174  
before to sludge lagoon  
near river.  
thinner sludge mixed  
to landfill gravel pit  
Sludge drying beds  
174 filter press underflow

6 of

used for burning oil. —  
tanks keep clean  
(oil from WTP) new goes  
to an oil reclaiming  
has been going to Tachona  
harbor for 12 years  
2 weeks ago shut down  
new sent to Christchurch

Sent to Scrap dealer —  
for disposal (Incinerator)

Chromate Crater to pickle  
waste holds tanks with  
scent in trench

fiberglass piping at  
Steel pipe lined w/ polyprop  
for gas exchange + Chromate  
Crater → under tunnel  
to → Sump under WTP  
Bldg. to Heliport  
20000 gallon sump  
Concrete sump brick lined  
Steel/rubber lined drain  
from bottom to test for  
leakage

7 of

phosphate Crater → holds  
tank holds solids/sludge  
Sent WTP site for oil  
or crushed Supplek.

Incinerator was located next  
to chloro oil tank →  
filtered through again  
into series of Incinerator  
natural gas pilot

Air products Noncontact cooling  
Crater to WTP  
WTP Crater  
1st Bob around

Industrial waste sewer from  
plant to primary mixers  
1st 2 in series — agitator and  
agitate the waters → solids  
through two primary settling  
and skimming tanks — solids  
drop solids skinned (so waste  
oil storage tank) solids pumped  
to thickener  
liquid to secondary mixture



[Air products supply  
 atmospheric gas -  
 captive plant only sell to  
 LTV or LTV parent  
 (Cople of ownership of plant)  
 built in 1962. Only a credit  
 the #2 Sinter added in  
 1972 and in 2001 to shipping  
 department  
 H.R.

- Boiler - air permits - natural gas fired - no devices
- Fine scrubber at pickle line a device - water cascaded
- Scrubber, ~~2~~ 1 permit
- Tandem Mill - very exhaust system - cyclone separator
- Centrifugation (meat emulsion/vegetable soluble solids oil) meat and plants removed 2 on Tandem
- Batch animal permits but no devices a natural gas fired

- Galvanizing permits for the furnace (welded steel strips to allow for continuous processing) natural gas fields

Two Clusters w/ second of  
manicure paragon  
on 2nd at Orville  
Sketch Annual Process  
North of Bldg.  
7th 20 Sts

2000

- 23 direct sewer  
24 a few emerald doul  
x0 two hold in tank  
25 + 26 same area  
nothing

30 ~~There~~ Doors collect  
added to your list  
creclamatun - 310.

33 ☒ Increased ~~to~~ used lead in the  
33 ☒ ~~spoon~~ removed from auto  
33 ☒ to 6 gal

2 of 49

electric /  
Machinery for tractor Tamiya  
motor (40%). 60% -  
Auto, body, appliances  
walls, floors, panels  
30%  
Tender → (2/3) to cold roll  
1/3 to galvanneal  
auto, grain bins,  
gum products  
2/3 → batch anneal with  
sheet  
1/3 → to galvanneal  
the steel is soft for  
or after the  
from the Temper mill  
to harden where an oil water  
is applied  
and sheared & cut  
if necessary  
the steel is then  
to anneal  
→ some to temper some  
to shearing & slitting  
store  
shipped

3 of 49

traverse on standard plant  
stack coils are shipped  
frames  
3 days from pick-up  
well through anneal  
the 2 days cooling  
Case down to 500° take out  
from annealing furnace to  
cool in ambient conditions  
18 batch anneal furnaces  
Galvanneal → Chromate  
phosphate  
100' finished anneal  
Campania 700  
Molten Zinc 700  
Cooling tower  
Bendigo (Phosphate)  
Chromate coated  
some to temper, some to  
some to shearing  
some shipped  
— mounts coils, some sheet

VSI

106 49

L TV STEEL CO.

HENNERIN, IL

IP# ILD000781591

WA#: R05-01-23

BY: A.T. KEARNEY -

L. AXE, G. TERDICH

0900 Arrived @ facility met  
with Paul Jellisonman.  
possible boring logs available  
from building construction.

condensin.  $\frac{1}{2}$ " -  $\frac{3}{16}$ "

only into storage  $\rightarrow$

Pickle barrel  $\rightarrow$  curled  $\rightarrow$

Conveyor  $\rightarrow$  Tandem rolls

mill rolled to 2 speeds  
gauge 120 to 140

(Pickle stands #4 790-890  $\rightarrow$ )

#Quarrels 2-3%

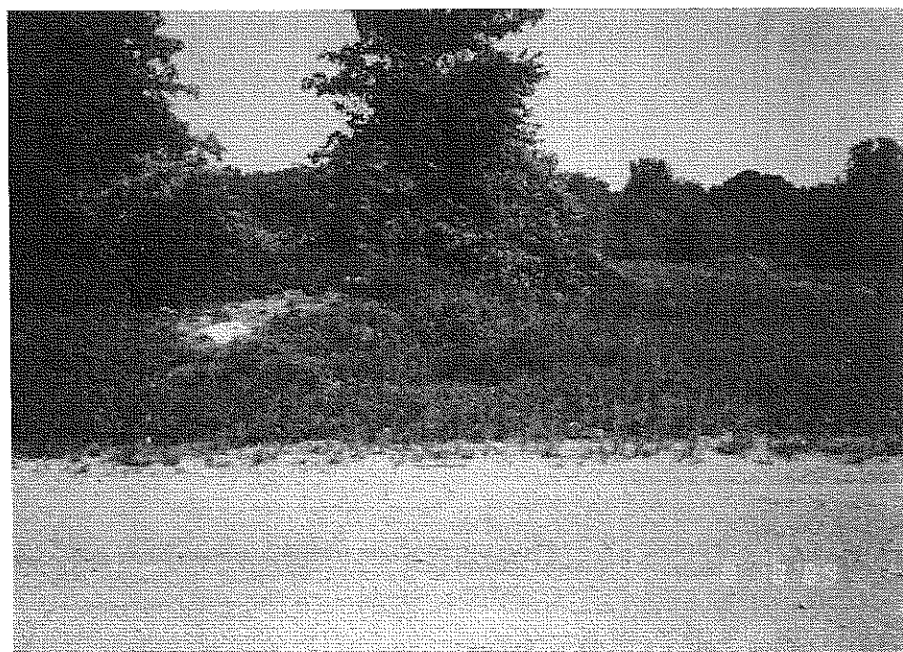
$\rightarrow$  WTP

ATTACHMENT D

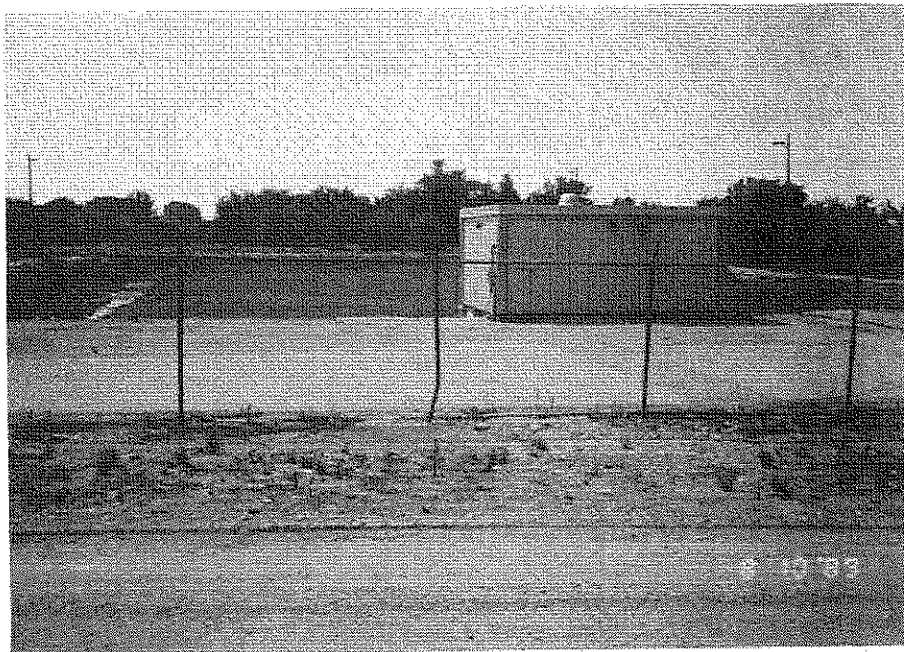
VSI LOGBOOK NOTES



Photograph 1-23 North view of Sludge Dozer (SWMU 49).



Photograph 1-24 North view of the Former Sludge Drying Beds (SWMU 47).

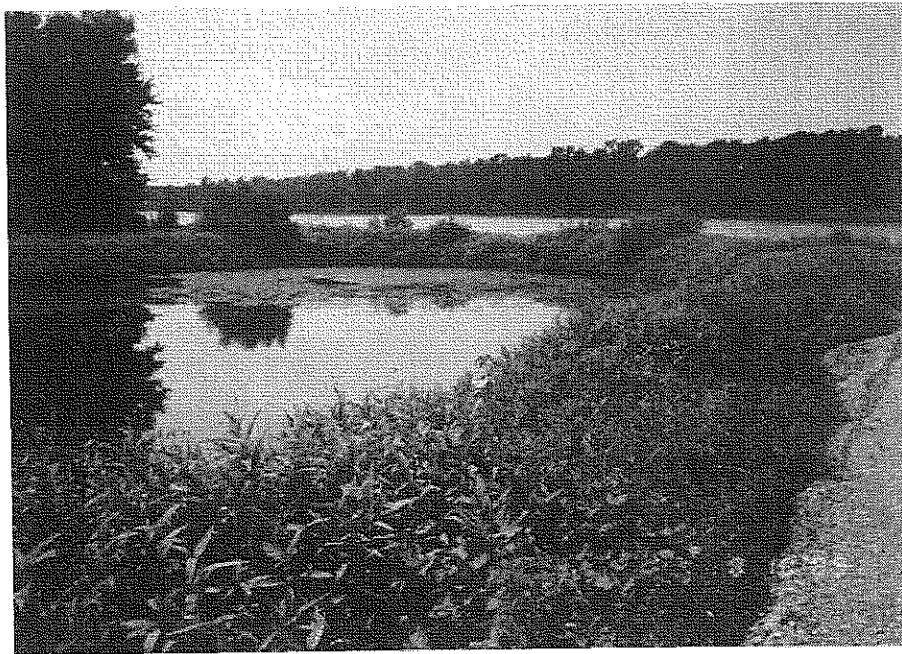


Photograph 1-25 South view of the Former Sludge Lagoon (SWMU 46).

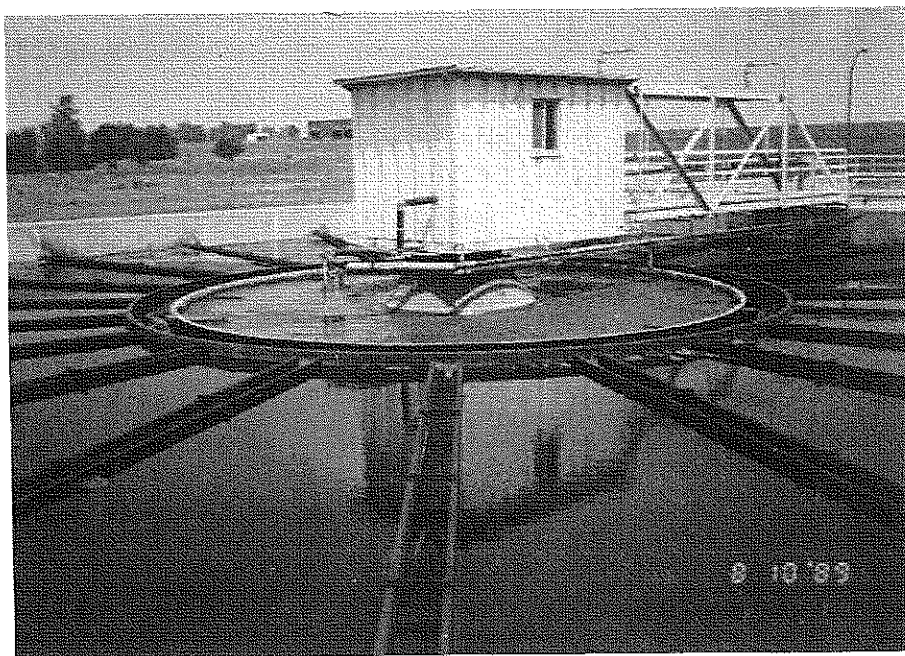


Photograph 1-26 East view of Effluent Lagoon (SWMU 45). Note cascades in background.

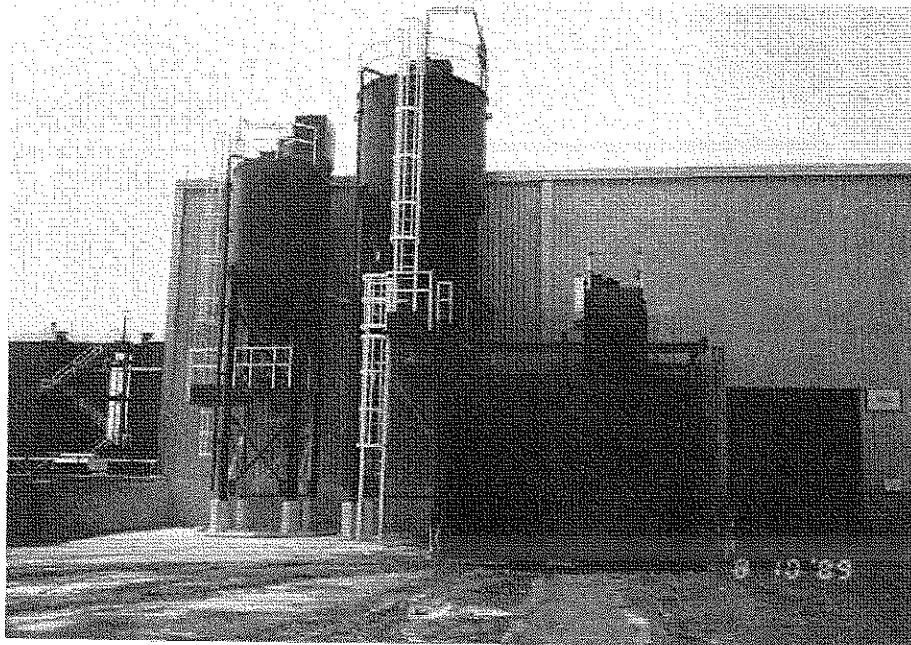




Photograph 1-27 Southwest view of Effluent Lagoon (SWMU 45) and Illinois River in background.



Photograph 1-28 Northeast view of the Number 2 River Water Clarifier (SWMU 23).

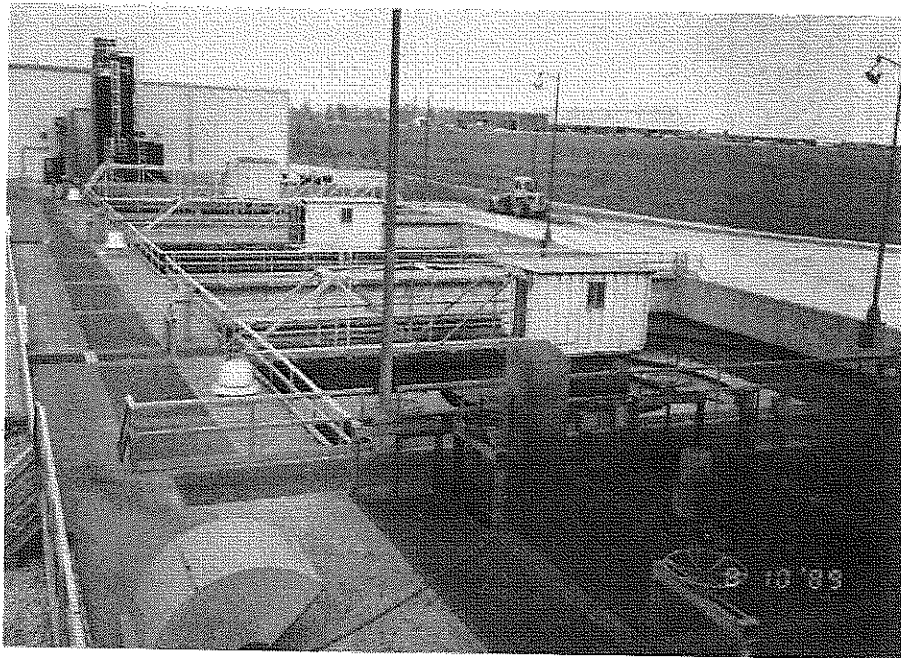


Photograph 1-29 West view of the Cement Dust Bins, Sludge Filter System (SWMU 34) conveyor, Sludge Bin (SWMU 35), and Sludge Roll-Off/Hauler (SWMU 36). Note sludge on pavement.

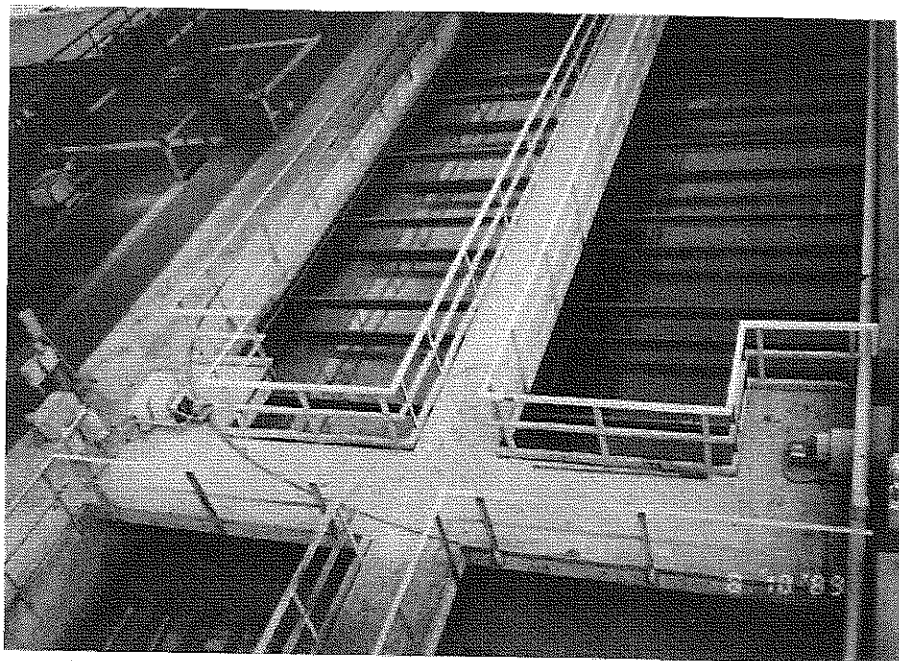


Photograph 1-30 South view of Sludge Front End Loader (SWMU 38). Note sludge on pavement and stains on gravel.

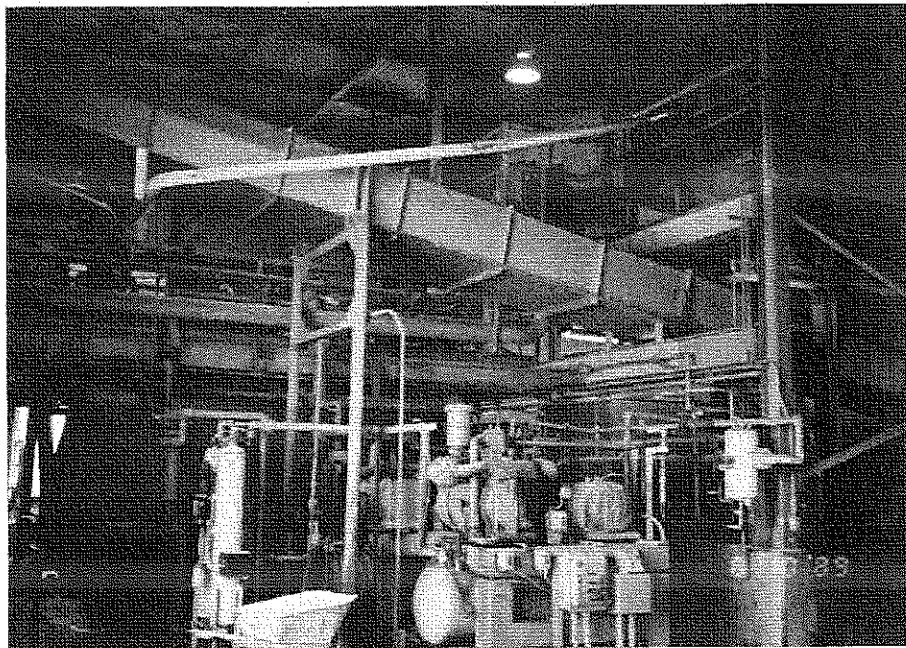




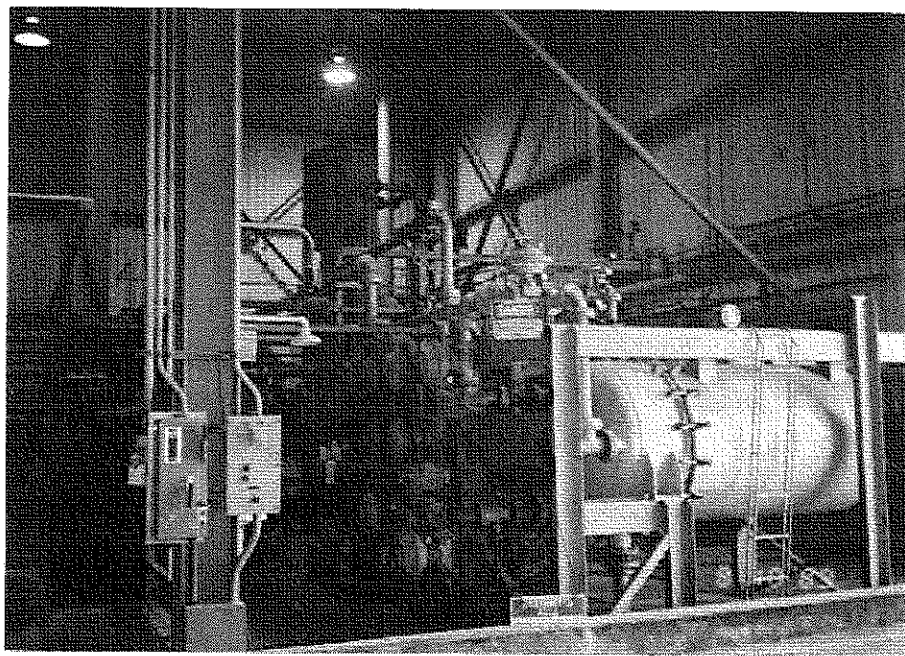
Photograph 1-31 Northeast view of Secondary Mixing Tanks (SWMU 26), Wastewater Flocculator Clarifiers Nos. 1 and 2 (SWMUs 27 and 28) and Sludge Thickener (SWMU 29) from foreground to background, respectively. Distribution Flume (SWMU 31) is at left. Note stains around Mixers.



Photograph 1-32 Looking down at Primary Settling Tanks (SWMU 25). Secondary Mixing Tanks (SWMU 26) are at left. Note stains on concrete.



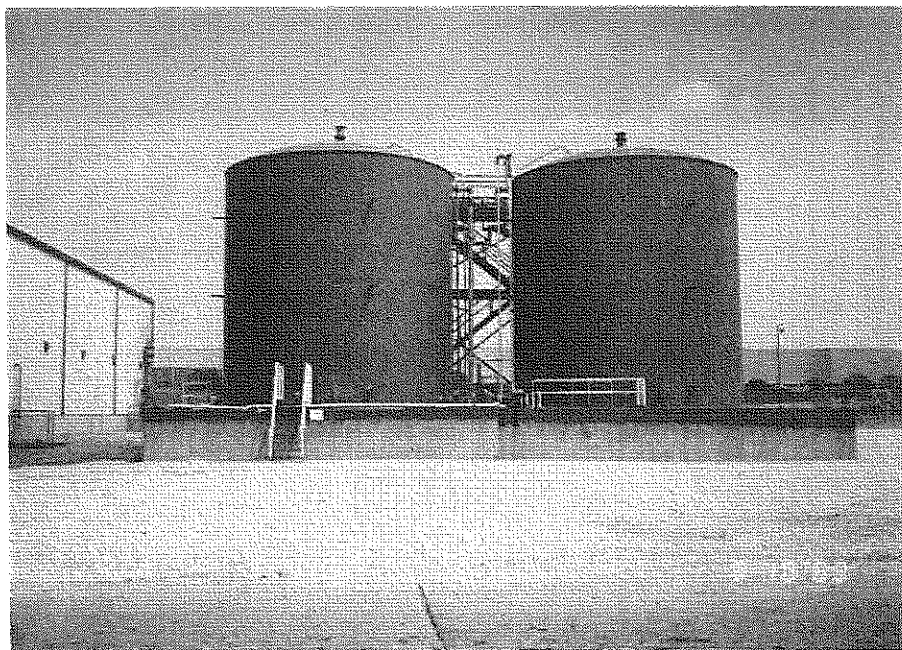
Photograph 1-33 Southwest view of Sludge Filter System (SWMU 34) - mixing tank (elevated tank behind pipes), holding tank (lower aqua-colored tank), filter (at right) and conveyor.



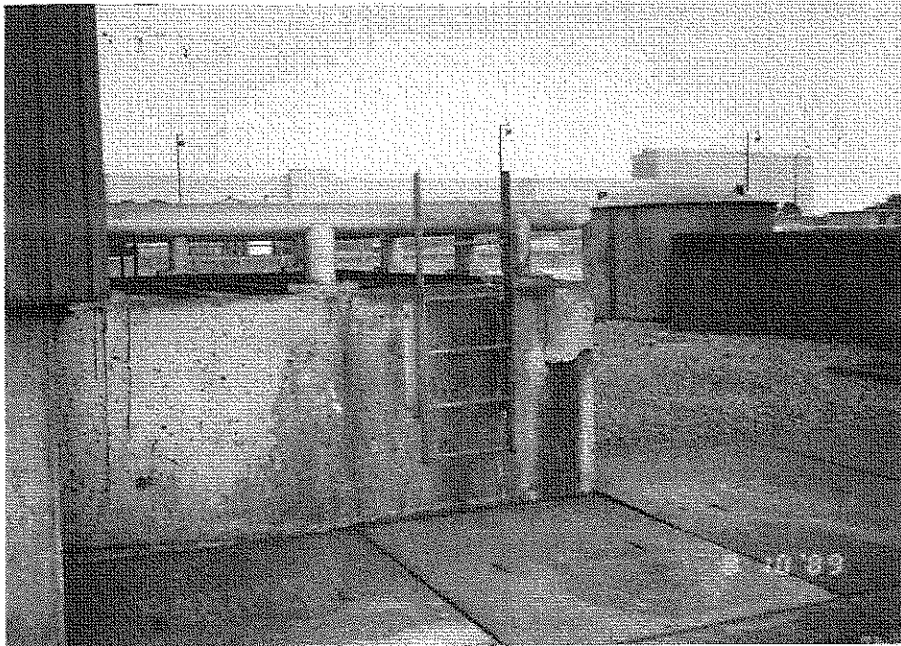
Photograph 1-34 Southwest view of Deep Well Injection System (SWMU 42) - pumps, filter tanks, and appurtenances.



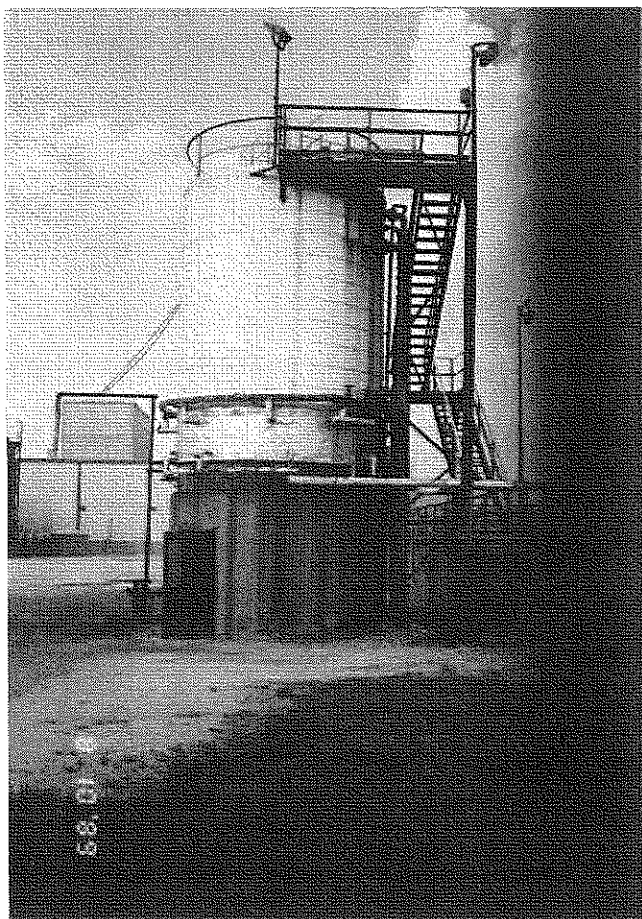
Photograph 1-35 West view of Underground Injection Well (SWMU 43).



Photograph 1-36 East view of Waste Pickle Liquor Tanks (SWMUs 40 and 41). Note stains on concrete walls and surrounding gravel at left.

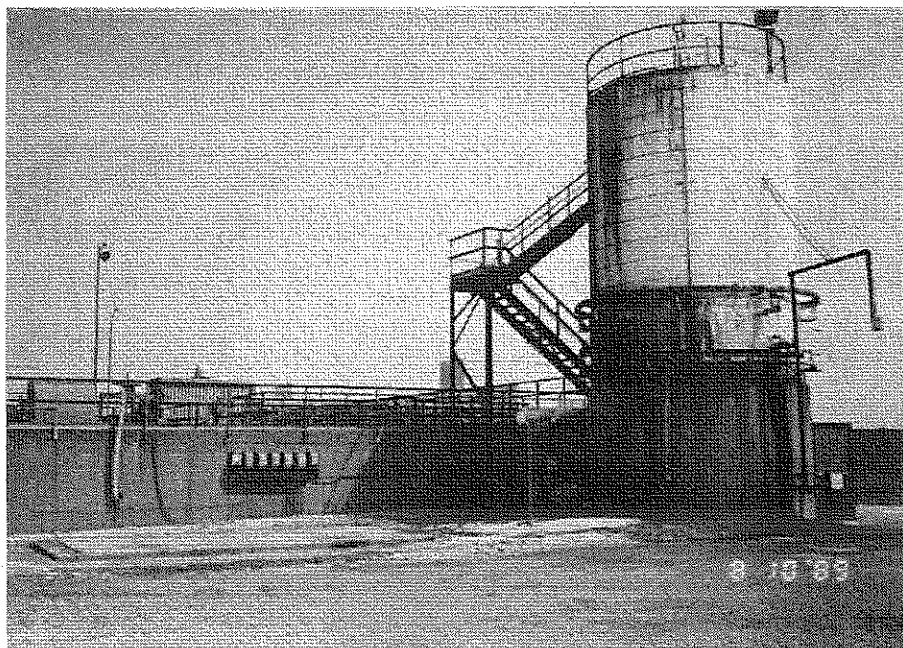


Photograph 1-37 Southeast view of Waste Pickle Liquor Sump (SWMU 39). Note stains on concrete walls and surrounding area. In background, empty phosphate product tank. (Photographs 1-38 and 2-1 are identical to Photograph 1-37.)

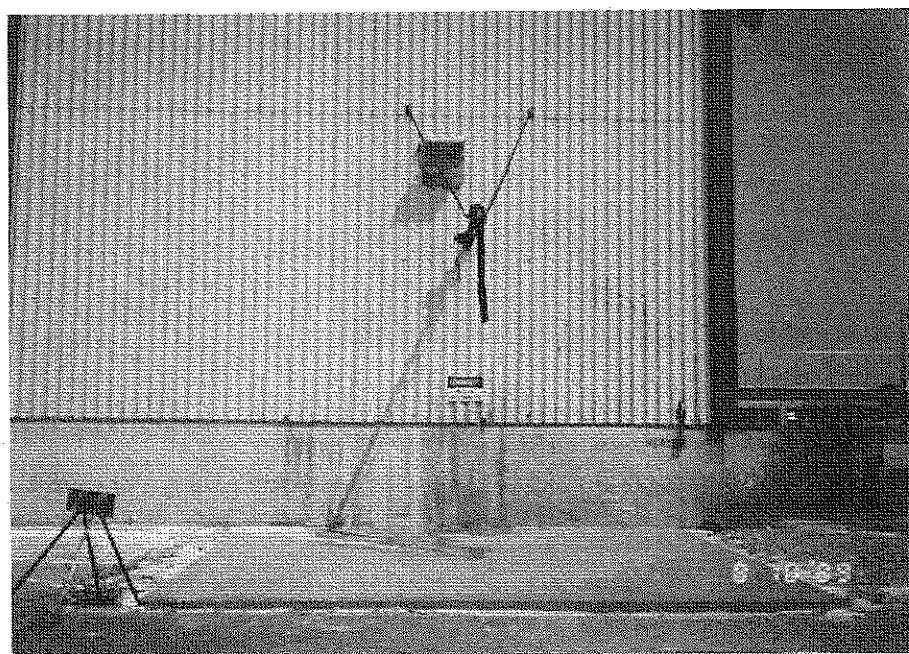


Photograph 2-2 North view  
of Waste Oil Tank (SWMU  
32). Note stains on and  
around tank.





Photograph 2-3 Southeast view of Waste Oil Tank (SWMU 32) and Former Waste Oil Incinerator (SWMU 33) pad. Note stains on and around tank.



Photograph 2-4 East view of Waste Pickle Liquor Loading Pad (SWMU 44). Note stains on building wall and concrete pad.

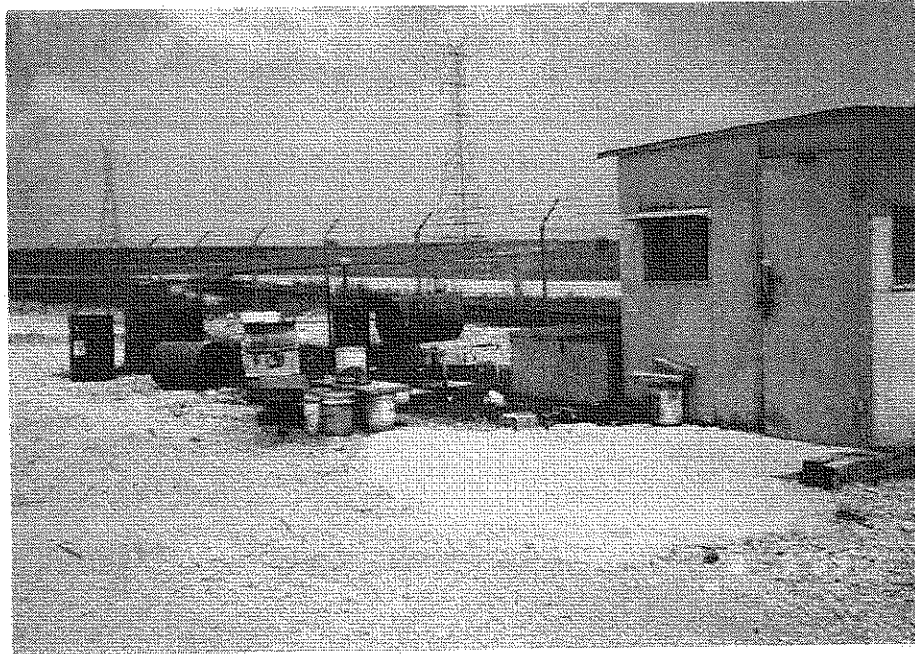




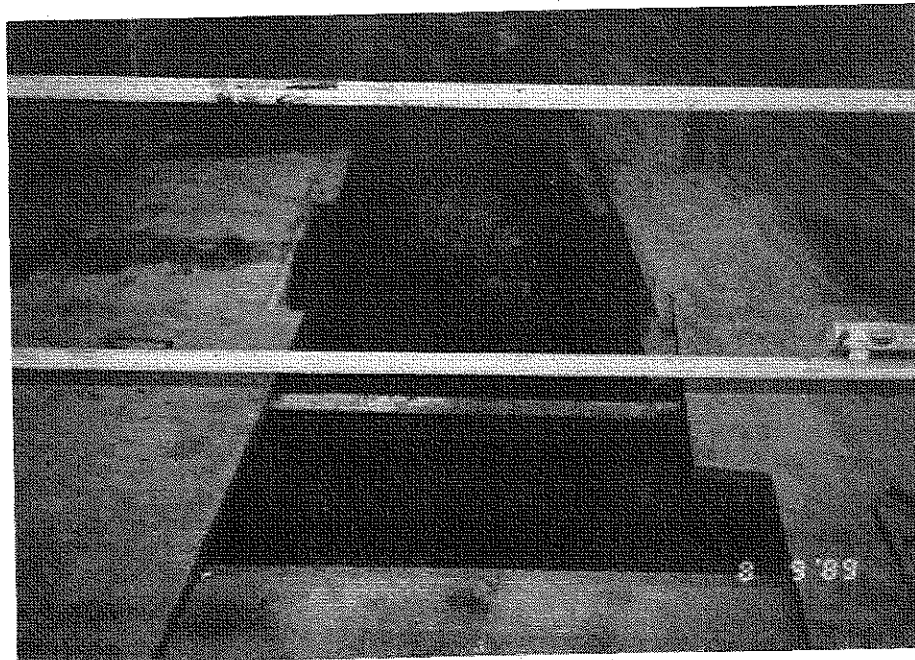
Photograph 1-1      East view of Former Wood and Packaging Wastes Trench (SWMU 1).



Photograph 1-2      South view of Former Metal Waste Trench (SWMU 2).  
Note stains near center of trench.

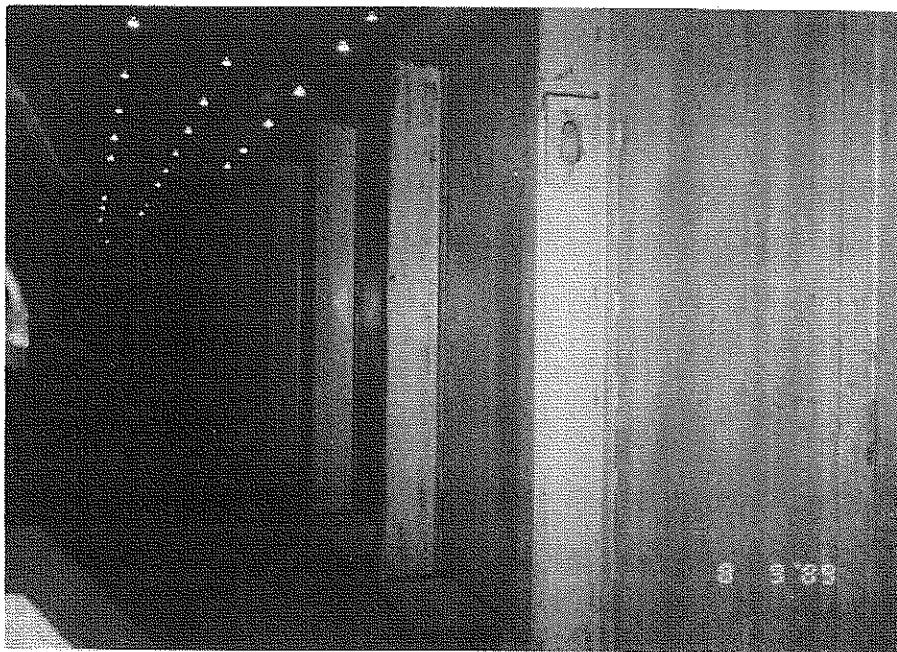


Photograph 1-3 Northeast view of Railroad Container Storage Area (SWMU 4). Note staining throughout area.

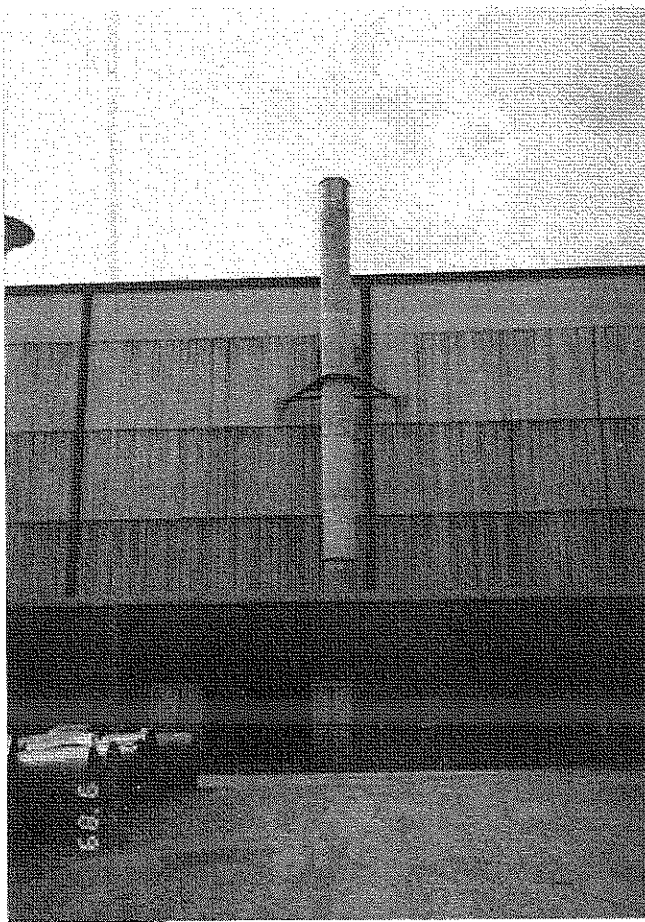


Photograph 1-4 West view of Industrial Sewer System (SWMU 20) area at former shear line. Sump contained an apparent oily wastewater.

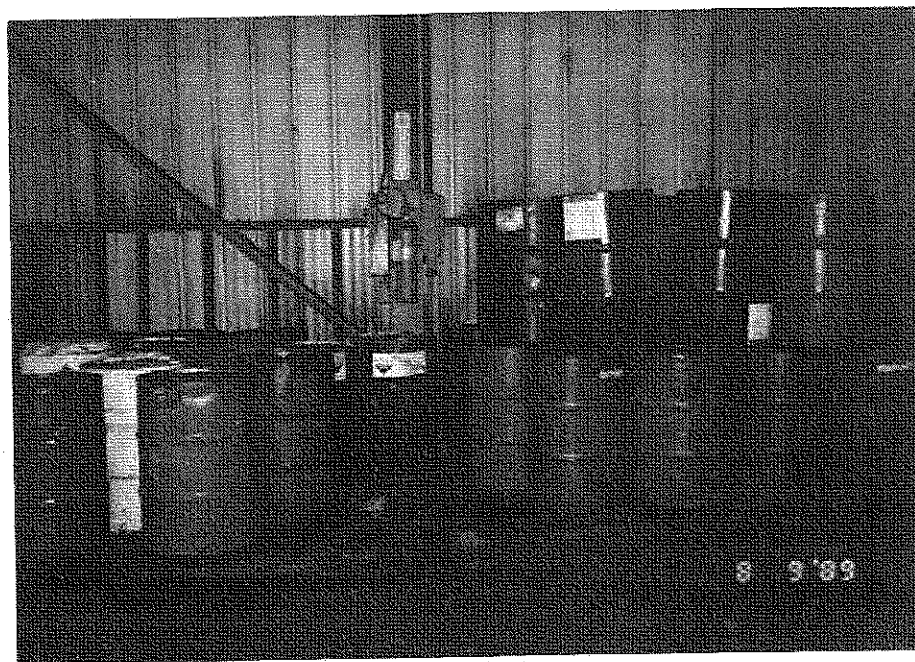
Photograph 1-5      South view of hydraulic oil pump leaking to  
Industrial Sewer System (SWMU 20).  
- Negative Not Developable -



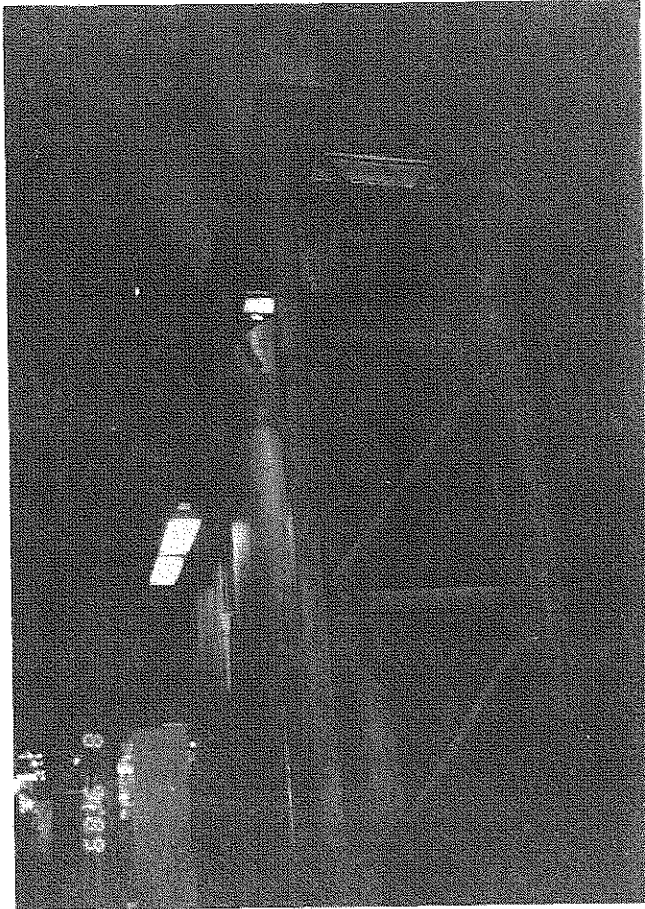
Photograph 1-6      South view of Waste Pickle Liquor Holding Tank  
(SWMU 8).



Photograph 1-7 West view of Pickle Line Fume Scrubber (SWMU 9). Vapor from stack is visible. In foreground of photograph, a portion of Steel Coil Yard is visible (SWMU 5).

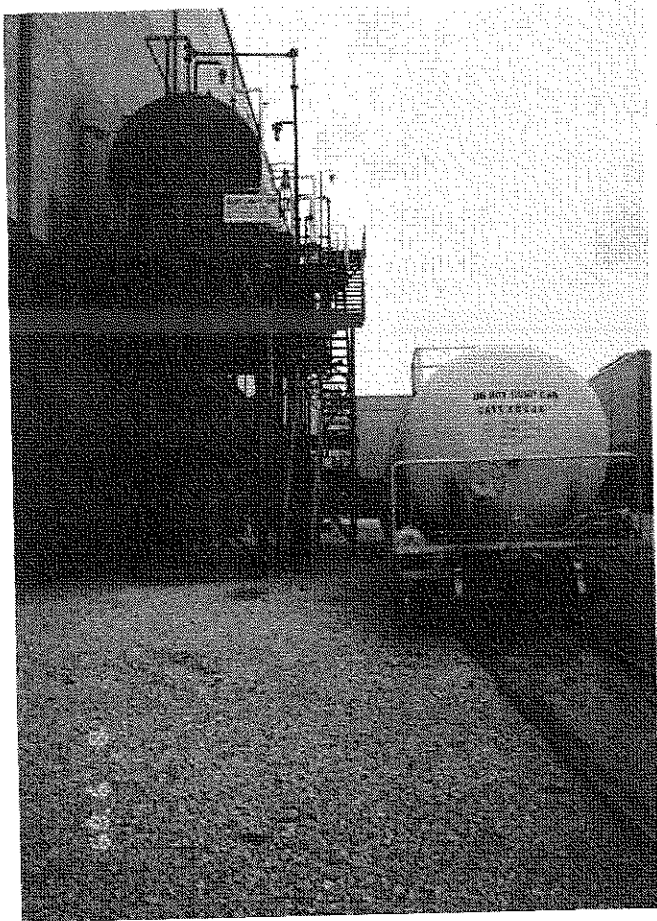


Photograph 1-8 South view of Empty Drum Storage Area (SWMU 12). Note oily stains on floor slab.



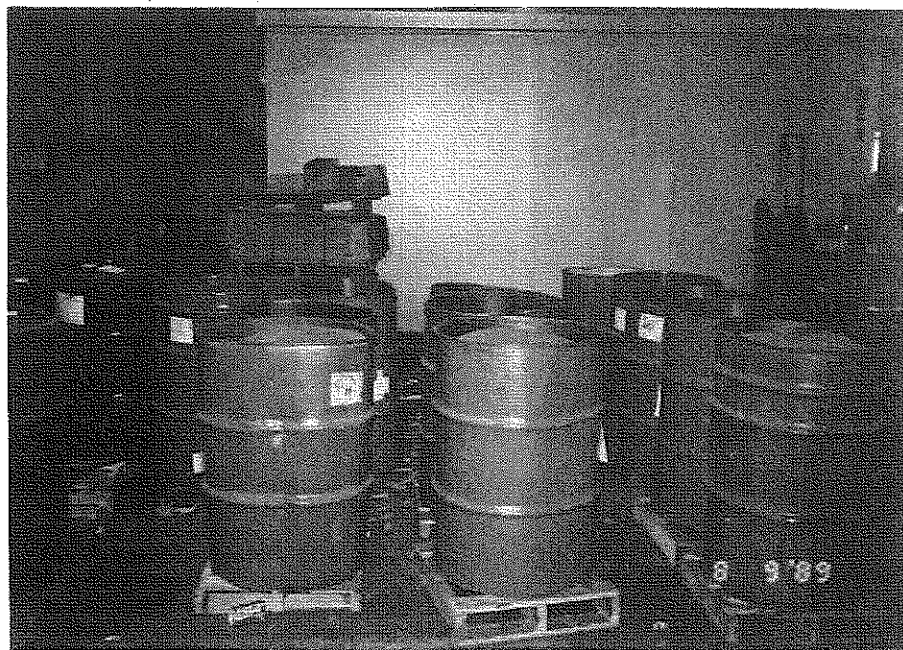
Photograph 1-9 North view  
of the tandem mill Oil Mist  
Eliminator (SWMU 10).



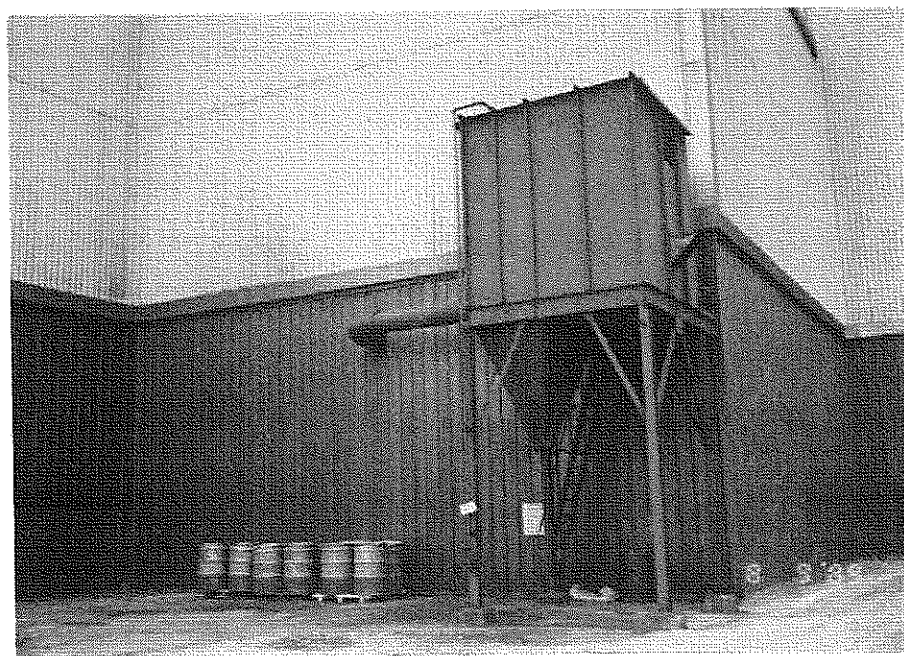


Photograph 1-10 South view  
of Hydrochloric Acid Product  
Tanks (SWMU 11). Note  
stains on gravel.

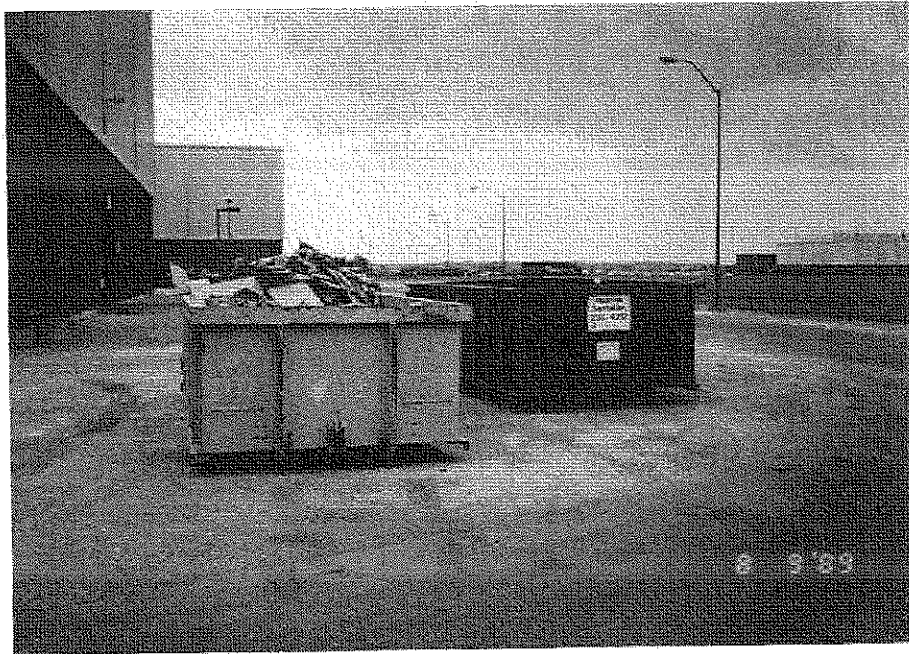




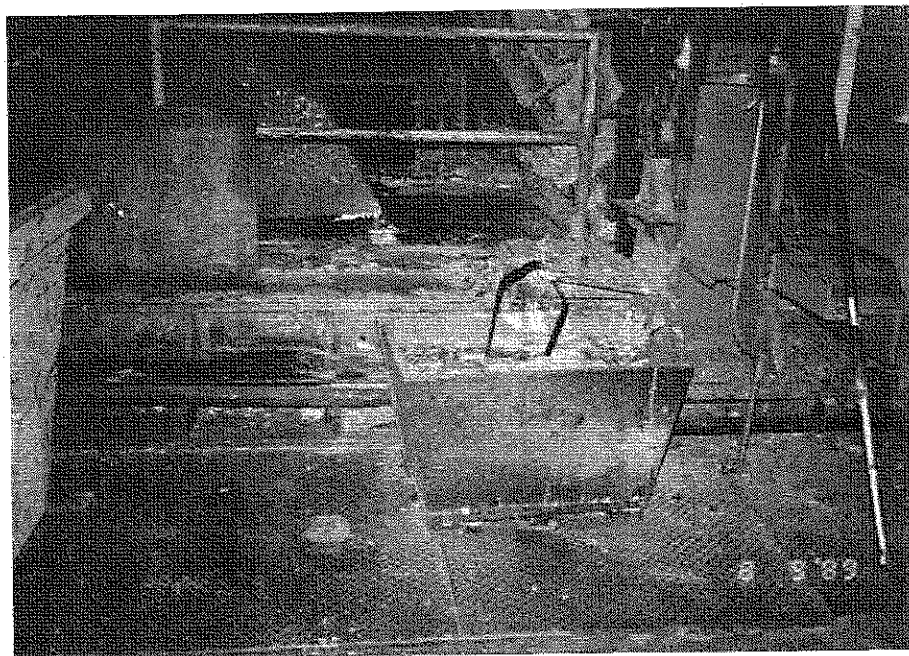
Photograph 1-11 North view of Shot Blaster Drum Storage Area (SWMU 15). Note that all of the drums are open and that there is waste on floor.



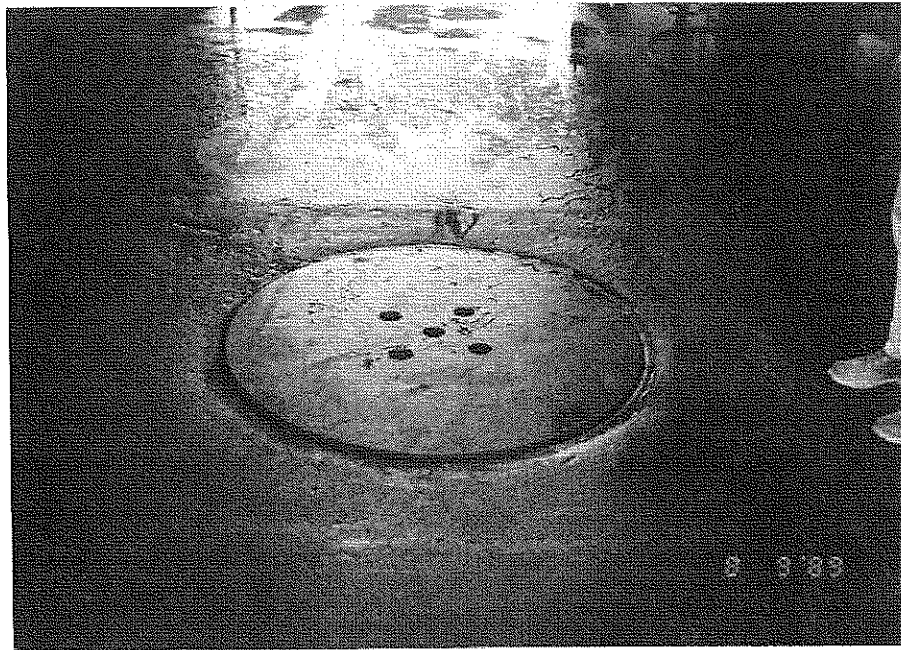
Photograph 1-12 South view of Bag House Drum Storage Area (SWMU 16) and Shot Blaster Bag House (SWMU 17). Caked waste near drums is barely visible.



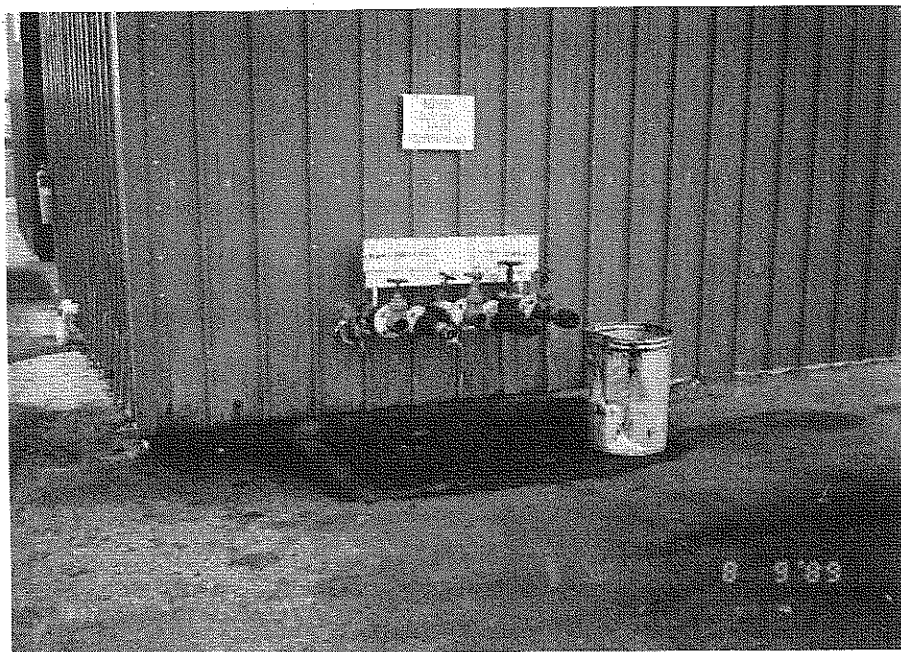
Photograph 1-13 West view of typical Municipal Waste Containers (SWMU 21). In background, loading station for the Diesel Fuel Underground Storage Tank (AOC B) is barely visible.



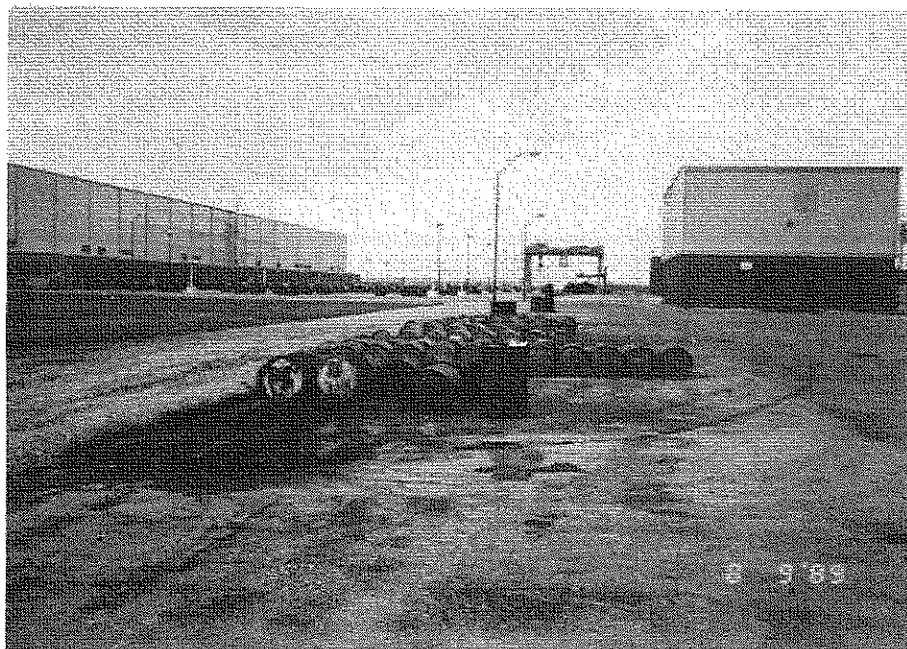
Photograph 1-14 East view of Dross Tank (SWMU 18).



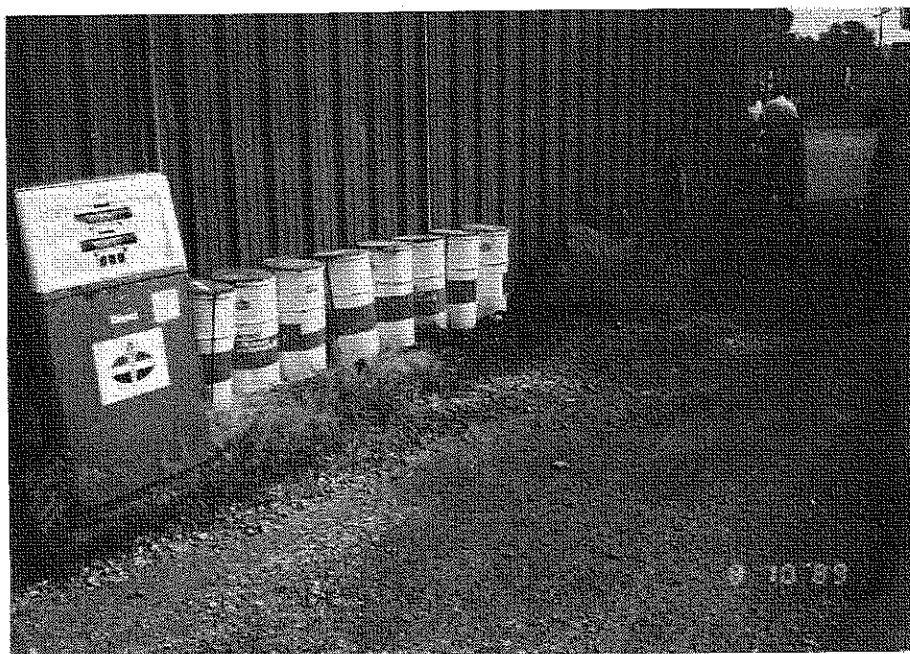
Photograph 1-15 West view of the east Car Wash Grease Trap (SWMU 19).



Photograph 1-16 West view of Bulk Oil Sump (SWMU 6) and oil inlet valves at Bulk Oil Building's southeast corner. Note stains on asphalt around sump.

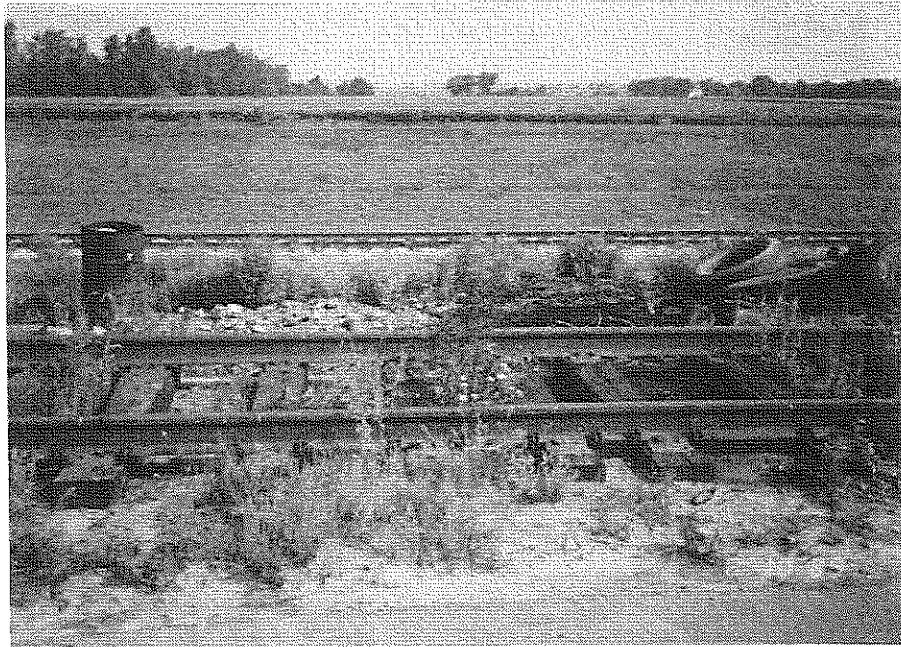


Photograph 1-17 North view of Product Drum Storage Area (SWMU 7). Note "tarry" stains in foreground. Black oily stains between drum rows. In background, view of Steel Coil Roll Yard (SWMU 5).

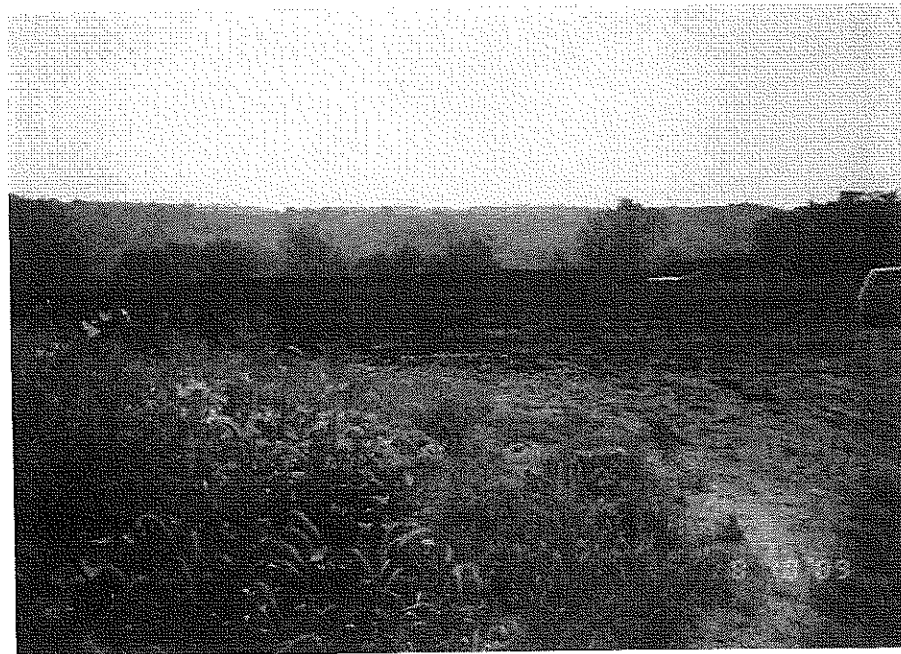


Photograph 1-18 East view of Kaplan Waste Oil Drum Area (SWMU 51) and Diesel Fuel UST (AOC F). Note oily stains around fill pipe and on ground.





Photograph 1-19 North view of Kaplan Burn Area (SWMU 52). Note oily stain.



Photograph 1-20 Southeast view of Sludge Landfill (SWMU 48) looking at surface of filled area.



Photograph 1-21 North view along east edge of Sludge Landfill (SWMU 48) with unfilled area in backyard.



Photograph 1-22 East view of unfilled area along east edge of Sludge Landfill (SWMU 48) - from top of working face. Farmland is visible in background.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

230 SOUTH DEARBORN ST.  
CHICAGO, ILLINOIS 60604

OCT 30 1989

REPLY TO THE ATTENTION OF:

5HR-JCK-13

Ms. Ann Anderson  
Technical Director  
A.T. Kearney, Inc.  
222 South Riverside Plaza  
Chicago, Illinois 60606

Re: LTV Steel Co. - R05-01-23

*Ann*  
Dear Ms. ~~Anderson~~:

Enclosed are comments on the Preliminary Review/Visual Site Inspection report for LTV Steel Co., received here September 22, 1989. We are sorry for the delay, which was caused by the original Work Assignment Manager's (WAM) leaving the Section and the subsequent reassignment of the report. If you have any questions, please call me or Bob Furher, the new WAM, at (312) 353-4889.

Sincerely

*Bernie*  
Bernie Orenstein  
Regional Project Officer

cc: Bob Fuhrer  
George Hamper

12



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

Review of Contractors PR/VSI  
for

LTV Steel Company, Hennepin, Illinois  
ILD 000 781 591

ROS - 01-23

A Preliminary Review/Visual Site Inspection (PR/VSI) (Draft Deliverable) was written by A.T.Kearney Inc., Chicago, Illinois for the LTV Steel Companies Hennepin plant located in central Illinois along the Illinois River. This report was well prepared and written. The citing of references throughout the report will help in making this document legally defensible. The technical quality of this report was very high. The various listings of the Solid Waste Management Units (SWMU) and Areas of Concern (AOC) were written in a clear and concise manner, making the review of this documents conclusions, easier.

The only problems were that maps of better quality, with scale, should have been used to reduce problems that may be encountered during sampling. The cross-section used on page 2-21, figure 5, should show where the cross-section transects. An RFA should include sampling at areas that there is unknown contamination, to verify if a hazardous waste has the potential for release from a unit, or to prove that hazardous wastes or constituents have migrated, or have the potential to migrate from a SWMU. Finally, in Appendix A, it is unknown what the analytical results are from; possibly a better explanation is needed to make this data useful.



LTV Steel Company



September 1, 1989

RECEIVED  
SEP - 5 1989  
OFFICE OF RCRA  
WASTE MANAGEMENT DIVISION  
EPA, REGION V

George Hamper  
Chief, Illinois Section  
RCRA Permitting Branch  
U.S. Environmental Protection  
Agency - Region, V  
230 South Dearborn Street  
Chicago, Illinois 60604

Dear Mr. Hamper:

Recently, U.S. EPA conducted a Visual Site Inspection ("VSI") at the Hennepin, Illinois Works of LTV Steel Company, Inc. ("LTV Steel"). LTV Steel, wishing to continue its policy and practice of working constructively with U.S. EPA, did not deny U.S. EPA's contractor access to the Hennepin Works, notwithstanding the apparent lack of statutory authority for the VSI. However, so as to avoid any misunderstanding in the future, particularly should U.S. EPA attempt to take the matter beyond the VSI, I am taking this opportunity to advise you of LTV Steel's view of U.S. EPA's action.

In your letter of July 20, 1989 to Paul N. Schlingman, announcing U.S. EPA's intention to conduct a VSI at the Hennepin Works, you refer to the 1984 Hazardous and Solid Waste Amendments ("HSWA") as requiring a RCRA facility assessment at the Hennepin Works. You fail to identify, however, the circumstances existing at the Hennepin Works which allegedly trigger U.S. EPA's limited authority under the HSWA to launch a facility assessment under the Resource Conservation and Recovery Act ("RCRA") by conducting a VSI. You only go on to say what the requirements and purpose of such an assessment are, i.e., that the assessment requires the identification and systematic review of all solid waste streams with the objective of determining whether or not releases of hazardous wastes or constituents have occurred or are occurring at the Hennepin Works which would require further investigation.

LTV Steel respectfully submits that U.S. EPA's authority to require a RCRA facility assessment is not as broad as you suggest in your letter. The identification of solid waste management units ("SWMUs") and releases for the purpose of implementing a corrective action program pursuant to RCRA Section 3004(u), 42 U.S.C. §6924(u), only arises in connection with situations "at a treatment, storage or disposal facility seeking a permit under this subchapter". (Emphasis supplied). LTV Steel is not seeking a permit under RCRA at the Hennepin Works. At one time (1980) the Hennepin Works had RCRA Part A

permits for spent pickle liquor storage tanks and an underground injection well. However, in 1987, LTV Steel secured an underground injection control permit under the Safe Drinking Water Act which superseded the RCRA Part A permit for the underground injection well, and for some time LTV Steel has been actively seeking to have the RCRA Part A permit for the storage tanks withdrawn since the spent pickle liquor has never been stored for more than 90 days. In any event, the corrective action authority applies only to circumstances where there are identified "releases of hazardous wastes or constituents." Neither Section 3004(u) nor the implementing regulations for a RCRA corrective action provides an independent basis for requiring investigations and monitoring relating to any non-RCRA unit which is not known to involve releases of hazardous wastes or constituents.

The limited scope of the corrective action authority is also reflected in the derivative regulatory enactment. In the final rulemaking, published at 50 Fed. Reg. 28746 (July 15, 1985), the regulations requiring corrective action activities were promulgated in 40 CFR Part 264 (at 40 CFR §§264.100 and 264.101). Consistent with the express statutory scope, the regulations in Part 264 apply prospectively and only to facilities seeking (or required to seek) a final Part B RCRA permit. As noted in United Technologies Corp. v. U.S. EPA, 821 F.2d 714, 722 (D.C. Cir. 1987), "Section 3004(u), in essence, creates the broad duty to take corrective action as guid pro quo to obtaining a permit." (Emphasis supplied). Since LTV Steel is not seeking such a permit and is not required to pursue a final permit at the Hennepin Works, Part 264 (including Sections 264.100 and 264.101) is inapplicable to this facility. See 40 CFR §§264.1 and 264.3. Part 264 applies only to regulated TSD facilities seeking a final permit, and the Hennepin Works is not such a facility.

The only other "corrective action" authority included in HSWA is contained in RCRA Section 3008(h), 42 U.S.C. §6928(h), which provides for issuance of "an order requiring corrective action or such other response measure" to "a facility authorized to operate under Section 6925(e) of this title". The interim status corrective action provisions of Section 3008(h) are specifically limited to the "release of hazardous wastes into the environment". The Hennepin Works is a 90-day generator only, and thus does not require authorization "to operate under Section 6925(e)". Although the Hennepin Works had a Part A permit for waste pickle liquor storage in the past, storage was never for more than 90 days and LTV Steel has requested that the permit be withdrawn. The Hennepin Works' Part A permit clearly falls within the definition of a "protective filing". Further, U.S. EPA's recent investigation



George Hamper  
September 1, 1989  
Page 3

was not based, as far as LTV Steel is aware, on any determination "that there is or has been a release of hazardous wastes into the environment". Thus, RCRA Section 3008(h) is not applicable. In any event, because Section 3008(h) authority is strictly limited to "hazardous wastes", Section 3008(h) corrective action could not apply to any area of the Hennepin Works which is not directly related to RCRA hazardous wastes.

U.S. EPA has, in some instances with which LTV Steel is familiar, asserted that Section 3007(a) of RCRA, 42 U.S.C. §6927(a), constitutes authority for conducting a VSI. LTV Steel does not believe, however, that Section 3007(a) is applicable in the case of the Hennepin Works. Section 3007(a) does not apply because it only permits the Agency "to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated, disposed of, or transported from; [and] to inspect and obtain samples from any person of any such wastes." 42 U.S.C. §6927(a) (emphasis supplied). As essential prerequisite to U.S. EPA's authority, therefore, is that the establishment entered is a place where there has been activity with respect to "hazardous wastes." An essential prerequisite to any U.S. EPA sampling authority is that the samples be of "hazardous wastes" or containers or labeling of "hazardous wastes", yet U.S. EPA did not limit the VSI at the Hennepin Works to "hazardous waste" issues. Should U.S. EPA desire to take samples at the Hennepin Works in the future, it is LTV Steel's position that the authority for taking such samples is limited to areas where hazardous wastes have been handled and, in fact, to the wastes themselves or containers or labeling for the wastes.

As you can see from the foregoing, LTV Steel seriously questions the legitimacy of U.S. EPA's recent inspection at the Hennepin Works. Consequently, although U.S. EPA's contractor was allowed to undertake a VSI at the Hennepin Works, LTV Steel reserves the right to contest any sampling inspections which U.S. EPA may wish to conduct at some time in the future and any use of the results of the VSI for purposes of requiring corrective action to be taken.

Very truly yours,



T.A. Zalenski  
Assistant Group Counsel

TAZ:CMF670



A.T. Kearney, Inc.  
222 South Riverside Plaza  
Chicago, Illinois 60606  
312 648 0111

Management  
Consultants

RECEIVED  
JUL 17 1989

OFFICE OF RCRA  
Waste Management Division  
U.S. EPA, REGION V

ATKEARNEY

July 17, 1989

Mr. Bernie Orenstein  
Regional Project Officer  
U.S. Environmental Protection Agency  
Region V  
230 South Dearborn  
Chicago, Illinois 60604

Reference: EPA Contract No. 68-W9-0040; Work Assignment No.  
R05-01-23; LTV Steel Company, Hennepin, Illinois; EPA  
ID No. ILD000781591; Visual Site Inspection  
Notification

Dear Mr. Orenstein:

Enclosed please find the Visual Site Inspection (VSI) Notification Letter and proposed Agenda (Attachment I) for the LTV Steel Company. The VSI is scheduled for August 9 through 11, 1989. Included for your review are lists of potential solid waste management units (SWMUs) and information needs (Attachment II) which we have developed based on our preliminary review of available file material.

As directed by the U.S. EPA Work Assignment Manager, Charles Wilk, the VSI Agenda has been sent to you on U.S. EPA letterhead for signatures and distribution.

Should you have any questions or require additional information, please feel free to contact us.

Sincerely,

*Greg M. Terdich*

Greg M. Terdich  
Work Assignment Manager

Enclosure

cc: C. Wilk, USEPA Region V  
A. Anderson  
A. Glazer  
J. Grieve  
L. Axe  
A. Williams (w/o attachment)

3102E-CH

(5)





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

230 SOUTH DEARBORN ST.

CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

JUL 27 1989

Mr. Paul N. Schlingman  
General Supervisor  
LTV Steel Company, Inc.  
State Route 71 and P.O. Box 325  
Hennepin, Illinois 61327

Reference: EPA Contract No. 68-W9-0040; Work Assignment  
No. RO5-01-23; LTV Steel Company, Hennepin,  
Illinois; EPA ID No. ILD000781591; Visual  
Site Inspection Notification Letter

Dear Mr. Schlingman:

This letter is to confirm that a visual site inspection (VSI) is to be conducted at LTV Steel Company by the Resource Conservation and Recovery Act (RCRA) implementation assistance contractor, A.T. Kearney, Inc. The VSI has been scheduled for August 9 through 11, 1989. Your cooperation in admitting and assisting the Kearney Team during the VSI is appreciated. The contractor personnel may be accompanied by Illinois Environmental Protection Agency representatives.

Under the 1984 Hazardous and Solid Waste Amendments (HSWA), a RCRA facility assessment is required at LTV Steel Company. The assessment requires identification and systematic review of all solid waste streams at the facility. The objective of this assessment is to determine whether or not releases of hazardous wastes or hazardous constituents have occurred or are occurring at the site which require further investigation. This assessment would provide information to establish priorities for subsequent remedial investigations.

An integral part of this assessment is a VSI of your facility to verify the location of all "solid waste management units" (SWMUs) and to determine their condition by visual observation. We are requiring that the contractor visit the facility for the purpose of a visual inspection of the SWMUs. During the site visit, no

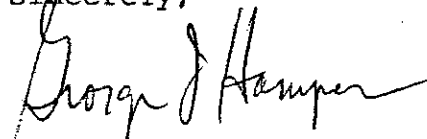
7

Mr. Paul Schlingman  
Page 2

samples will be collected. The contractor may require the assistance of some of your personnel in reviewing solid waste flow(s) or previous disposal practices. This site visit will provide the contractor a technical understanding of the present and past waste flows and handling, treatment, storage, and disposal practices. Photographs of each SWMU will be taken to document the condition of the units at the facility and the waste management practices used.

It is currently planned that the VSI of your facility will occur on August 9 through 11, 1989. Copies of the VSI Agenda and Preliminary Information Needs are attached. Should you have any questions regarding this letter, please contact Chuck Wilk of my staff at (312) 886-0995 or the A.T. Kearney Work Assignment Manager, Greg Terdich, at (312) 993-8841.

Sincerely,



George Hamper  
Chief, Illinois Section  
RCRA Permitting Branch

Enclosure

cc: B. Orenstein, U.S. EPA Region V  
C. Wilk, U.S. EPA Region V  
A. Anderson, A.T. Kearney, Inc.  
J. Grieve, A.T. Kearney, Inc.  
L. Eastep, IEPA



ATTACHMENT I

RCRA Facility Assessment  
Visual Site Inspection Agenda

FACILITY: LTV Steel Company, Incorporated  
Hennepin Works  
State Route 71 and P.O. Box 325  
Hennepin, Illinois 61327

EPA I.D. No.: ILD000781591

FACILITY CONTACT: Paul N. Schlingman  
General Supervisor  
(815) 925-2133

DATE OF INSPECTION: August 9 through 11, 1989

PERSONNEL: Greg Terdich, A.T. Kearney, Inc.  
Lisa Axe, A.T. Kearney, Inc.

PURPOSE OF INSPECTION:

The Hazardous and Solid Waste Amendments of 1984 (HSWA) broaden the scope of the Environmental Protection Agency's (EPA's) authority under the Resource Conservation and Recovery Act (RCRA) by requiring corrective action for releases of hazardous wastes and constituents at facilities that manage hazardous wastes. The RCRA Facility Assessment (RFA) is conducted to evaluate the potential for releases to the environment and the need for corrective action.

The RFA includes a desk-top preliminary review (PR) of available file information, a visual site inspection (VSI) of the facility and, if necessary, a sampling visit. Based on the review of available data for this facility, a visual site inspection (VSI) has been determined to be necessary. The purpose of the VSI is to:

1. Survey the site for hydrologic, geologic, and surficial features.
2. Identify solid waste management units (SWMUs) and other areas of concern, documenting and photographing all SWMUs and other areas of concern.
3. Review site information with facility representatives.

LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

INSPECTION ORGANIZATION

A.T. Kearney personnel will form a two-member team to perform a three-day inspection tour of the facility. The team, in general, will inspect the facility layout of production facilities, waste generation and disposal areas, storage tanks, and potential waste-release pathways to soil, ground water, surface water, and air. An interview with the facility staff will be performed to develop a better understanding of past waste disposal practices. Pertinent geologic information consisting of well logs, USGS topographic maps, plat and zoning maps, and surrounding land use patterns will be reviewed if available. The team will concentrate on developing a better understanding of the vertical and horizontal relationships of the surface impoundments, container storage areas, and other waste generation, treatment, storage, and disposal facilities. A review of the regional hydrogeology and site specific data will be performed to make an assessment of depth to ground water and its flow direction in the proximity of the Solid Waste Management Units (SWMUs).

The overall rationale of this inspection plan is to enable the team to trace waste streams from the process through disposal. Some adjustments to the agenda may be necessary to accommodate facility staff, geographical location of units, and/or operational constraints.

Preliminary information needs have been submitted as Attachment I to aid LTV Steel Company, Inc. in preparing for the site visit. These issues will be discussed in an introductory meeting during the VSI. A more specific agenda may be arranged at that time to ensure that all SWMUs will be inspected.

LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

PROPOSED INSPECTION SCHEDULE

August 9 - 11, 9:00 a.m. - 5:00 p.m. (0900-1700 hours) each day

INTRODUCTORY MEETING

Inspection Team will meet with LTV Steel Company, Inc. Personnel to discuss:

- Purpose of visit;
- Agenda;
- Health and Safety considerations;
- Transportation Arrangements (if appropriate);
- Facility history and operations; and,
- Additional information needs pertaining to the Solid Waste Management Units and Areas of Concern identified during the PR including production processes which may result in the generation of waste streams.

INSPECTION TOUR OF POTENTIAL SWMUS IDENTIFIED

The inspection tour will consist of a visual inspection of the identified solid waste management units and other areas of concern. Photographs of these units and areas will be taken. The inspection tour schedule will be discussed and agreed upon during the introductory meeting and discussions.

The following are lists of potential SWMUs and areas of concern identified during the file review. These and all other SWMUs and areas of concern identified while at the site will be inspected.

LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

Potential SWMUs

1. Waste Oil Tank
2. Waste Pickle Liquor Tanks
3. Waste Pickle Liquor Sumps
4. Sludge Lagoon
5. Lagoon
6. Landfill at Gravel Dump/Quarry
7. Deep Well Injection Facility
8. Earthen Trench for Wood and Non-Special Packaging Wastes
9. Earthen Trench - Metal Wastes for Reclamation
10. Clarifier Flocculator Tank(s) Sump(s)
11. Sludge Thickener Sump(s)
12. Old Sludge Land Disposal Unit
13. #1 Oil Mist Eliminator Stack
14. Boiler Stack #1
15. Batch Anneal Process Emissions Stacks
16. Batch Anneal Fuel Emissions Stacks
17. Pickle Line Fume Scrubber
18. Storm Sewer System
19. Pickle Rinsate Tank(s)
20. Galvanizing Rinsate Tank(s)
21. Chromate Rinsate Tank(s)
22. Air Products Waste Accumulation Area (WAA)
23. Boiler Blowdown WAA
24. Pickle Line WAA
25. Tandem Mill WAA
26. Cold Rolling Mill WAA
27. Batch Anneal WAA
28. Temper Mill WAA
29. Sheet Shearing/Slittering WAA
30. Galvanizing Line WAA
31. Chromate Coating WAA
32. Incinerator Rinsate Tank
33. Incinerator Rinsate Sump

LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

Potential Areas of Concern

- A. 1,000 gallon spill area of soluble rolling oil (April 1977)
- B. 7,000 gallon spill area of waste pickle liquor (May 1977)
- C. 100,000 gallon spill area of waste pickle liquor  
(July 1982)
- D. Minor waste pickle liquor spill area on gravel near truck  
loading station (May 1984)

WRAP-UP MEETING

Inspection Team will meet with LTV Steel Company, Inc. personnel to conclude each day's activities.





LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

ATTACHMENT II

PRELIMINARY INFORMATION NEEDS FOR  
THE RCRA FACILITY ASSESSMENT

WASTE CHARACTERIZATION AND PROCESS INFORMATION

1. Identify any hazardous constituents present (and the concentrations, if known) of oils used in the past and present, including rolling, lubrication, and transformer and/or other equipment oils, treated at the wastewater treatment plant, recycled at the facility, or shipped off-site for treatment or disposal.
2. Describe waste recycling and wastewater treatment processes at the facility including all current or past activities and those operated by subcontractors. Include discussion on any waste collection, transfer, or storage units which are utilized in the recycling and wastewater treatment processes.
3. Describe the Brule Incinerator Process. Identify any waste collection, transfer, or storage units associated with the incinerator, including any units utilized for the management of ash residues.
4. Describe the current Deep Well Injection Facility process. Include the waste collection, transfer, and storage units associated with the process in discussing the current waste feed rates, total volume injected, projected capacity and/or proposed closure date.
5. Identify all underground storage tanks located within the approximately 7,000 contiguous acre LTV property. Include a brief description, material of construction, period of operation, tank capacity, volume handled since start-up, wastes or products managed, testing procedures and intervals, and monitoring inspections.

LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

ATTACHMENT II

PRELIMINARY INFORMATION NEEDS FOR  
THE RCRA FACILITY ASSESSMENT  
(cont'd)

SOLID WASTE MANAGEMENT UNITS

6. Provide the following information for SWMU Nos. 1 - 33:
- Exact Location,
  - Dimensions,
  - Material of Construction,
  - Type of Operation,
  - Regulatory Status,
  - Date of Start-Up,
  - Date of Closure,
  - Wastes Managed,
  - Capacity/Volume of Wastes Managed,
  - Source of Waste,
  - Process Rate,
  - Hazardous Constituents/Waste Codes,
  - Waste Disposition,
  - Release Controls, and,
  - History of Releases.
7. Identify past or present Solid Waste Management Units which have not been previously identified in the VSI Agenda. Include a brief description of wastes managed in these units and the period of operation. Units to identify include, but are not limited to, the following:
- Above ground storage tanks.
  - Waste storage units for hazardous wastes which fall under the 90 day exemption from RCRA.
  - All waste handling areas and associated activities including, loading zones, transfer areas, and waste accumulation areas.

LTV Steel Company, Inc.  
Hennepin Works  
Hennepin, Illinois  
Visual Site Inspection  
August 9-11, 1989

ATTACHMENT II

PRELIMINARY INFORMATION NEEDS FOR  
THE RCRA FACILITY ASSESSMENT  
(cont'd)

HISTORICAL PERSPECTIVE

8. Provide the start-up date of the facility and description of any processes and/or disposal changes which have altered the facility profile over the life of the operation.
9. Submit information relative to the history of the facility including former owners, site uses, manufacturing practices used, and wastes generated.
10. Specify what buildings and/or structures existed prior to LTV Steel Company's acquisition of the site.

MISCELLANEOUS

11. Provide facility maps, including all historical topographic maps and aerial photographs, which identify the locations of all plant operations, wastewater treatment plant, and the SWMUs listed in the VSI Agenda.
12. Provide flow diagrams for the facility storm and sanitary sewer systems including locations of all sewer drains.
13. Provide current flow diagrams for the wastewater treatment plant.
14. Provide a list of air pollution control devices utilized at the facility and indicate the permit status of each.
15. Provide current production flow diagrams for the facility operations.
16. Provide any soil boring logs, monitoring well logs, and soil and/or ground-water analyses.

A.T. Kearney, Inc.  
222 South Riverside Plaza  
Chicago, Illinois 60606  
312 648 0111

Management  
Consultants

RECEIVED  
JUL 07 1989  
OFFICE OF RCRA  
Waste Management Division  
U.S. EPA, REGION V

Chuck

This is a  
revised version  
of the original page.

ATKEARNEY

June 30, 1989

Mr. Bernie Orenstein  
Regional Project Officer  
U.S. Environmental Protection Agency  
Region V, 5HR  
230 S. Dearborn Street  
Chicago, Illinois 60604

Reference: EPA Contract No. 68-W9-0040; Work Assignment  
No. R05-01-23; LTV Steel Company, Hennepin,  
IL; EPA I.D. No. ILD000781591; Preliminary  
Review/Visual Site Inspection; Work Plan

Dear Mr. Orenstein:

Enclosed please find the proposed work plan which you requested for the above-referenced work assignment. This work plan calls for the Kearney Team to perform a review of State of Illinois files, conduct a Preliminary Review (PR), complete a Visual Site Inspection (VSI) of the solid waste management units (SWMUs) and other areas of concern (AOCs) at the LTV Steel Company, and to complete an interim RCRA Facility Assessment (RFA) report.

At the request of the EPA Work Assignment Manager (EPA WAM), Chuck Wilk, the Kearney team will prepare a PR report to be submitted to EPA by July 21, 1989. Also, the EPA WAM has requested that Kearney directly contact the facility. The letter of notification for the VSI will be prepared by Kearney on EPA letterhead and submitted to EPA for signature and distribution.

The level of effort and associated costs presented in the work plan represent our best estimate based on our initial review of the file material obtained from the Illinois Environmental Protection Agency's Headquarters in Springfield, Illinois. U.S. EPA files will be reviewed by the EPA WAM.

RELEASED  
DATE 1/10/9  
RIN # 20370  
INITIALS ck

5

Mr. Bernie Orenstein  
June 30, 1989  
Page Two

LTV Steel reportedly owns approximately 7,000 contiguous acres of land at this site. The plant proper occupies about 450 acres, with some land disposal units and primarily farmland comprising the remaining acreage. We anticipate that approximately 100 SWMUs and AOCs exist at this facility. If, during the VSI, additional SWMUs are identified, the EPA WAM will be notified and the work plan will be amended to incorporate any additional level of effort needed to complete the RFA tasks.

All applicable A.T. Kearney Conflict of Interest Avoidance procedures have been adhered to for the proposed firms and staffs.

Also enclosed is a work plan approval sheet which you should sign and return to Allen Pearce. In accordance with the procedures for this contract, if the Contracting Officer has not provided written approval of this work plan by July 30, 1989, A.T. Kearney will stop work on this project. In these cases, A.T. Kearney will not resume work until the Contracting Officer approves the work plan.

In order to determine the need for a health and safety plan, or to prepare such a plan, the Kearney Team may need to obtain additional information from EPA or the facility personnel regarding the potential hazards at this facility. If information is not provided to the level of detail required to properly assess potential hazards, A.T. Kearney reserves the right to delay proceeding with the site visit until the information is provided.

In cases where the Kearney Team must delay a site visit due to circumstances not anticipated, A.T. Kearney will accommodate the schedule change to the maximum extent possible. However, A.T. Kearney reserves the right to charge EPA for expenses incurred as a direct result of the delay. Any such expenses will be brought to EPA's attention as quickly as possible and will be properly documented.

Mr. Bernie Orenstein  
June 30, 1989  
Page Three

Please feel free to call me or Greg Terdich, the Kearney  
Work Assignment Manager (who can be reached at  
312/993-8841), if you have any questions.

Sincerely,



Ann L. Anderson  
Technical Director

Enclosure

cc: A. Pearce, EPA OSW  
S. Kovash, EPA Contracts  
✓ C. Wilk, EPA Region V  
A. Glazer  
L. Poe  
G. Terdich  
P. Martz  
M. Greenwood  
L. Axe  
P. Williams  
A. Williams  
M. Ritter  
B. Rohrer, DPRA

2983E-CH



# PROPOSED WORK PLAN

LTV STEEL COMPANY  
HENNEPIN, ILLINOIS  
RCRA FACILITY ASSESSMENT  
PRELIMINARY REVIEW/VISUAL SITE INSPECTION

Submitted by:

A.T. Kearney, Inc.  
222 S. Riverside Plaza  
Twenty-Fifth Floor  
Chicago, IL 60606

Submitted to:

U.S. Environmental Protection Agency  
Region V  
230 South Dearborn Street  
Chicago, Illinois 60604

In response to:

EPA Contract No. 68-W9-0040  
Work Assignment No. R05-01-23

June 30, 1989

EP Contract No. 68-w9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

Regional Work Plan Approval

I have reviewed the attached work plan and find it meets our criteria for technical accuracy and properly reflects the scope of work and intended use of the deliverable(s), as described in the work assignment. The projected cost, staff hour estimates, and labor mix are also acceptable.

APPROVAL:

\_\_\_\_\_  
EPA Regional Project Officer

\_\_\_\_\_  
Date

APPROVAL:

\_\_\_\_\_  
EPA Headquarters Project Officer

\_\_\_\_\_  
Date

APPROVAL:

\_\_\_\_\_  
EPA Contracting Officer

\_\_\_\_\_  
Date

CONCURRENCE:

\_\_\_\_\_  
A.T. Kearney Program Director

\_\_\_\_\_  
Date

EP Contract No. 68-w9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

LTV STEEL COMPANY  
HENNEPIN, ILLINOIS  
PRELIMINARY REVIEW/VISUAL SITE INSPECTION

WORK TO BE PERFORMED

The Kearney Team will perform a file search of State of Illinois files, conduct a Preliminary Review (PR) and prepare a PR report as requested by the EPA Work Assignment Manager. Additionally, a Visual Site Inspection (VSI) will be conducted and a PR/VSI report will be prepared which evaluates the potential for release from each solid waste management unit (SWMU) and area of concern (AOC) identified during the PR/VSI. Additionally, the report will include suggested further actions.

LTV Steel Company (LTV) produces sheet steel products at this facility using cold forming, annealing and galvanizing processes. Waste streams include spent pickle liquor, hexavalent chromium wastes, organic solvents, and wastewater treatment plant (WWTP) sludges. Some wastes are treated in the on-site WWTP, while others are disposed of into the on-site underground injection well. The plant proper occupies approximately 400 to 500 acres of some 7,000 contiguous acres owned by LTV at this location. The remaining acreage is primarily farmland, but 1 to 3 land disposal units are indicated in this area.

The final PR/VSI report will include a suggested sampling approach for each unit or area where sampling is deemed necessary. Sampling activities will not be conducted as part of this assignment.

PRIMARY INTENDED USE

The purpose of this work assignment is to assist EPA Region V in:

- (1) Identifying and gathering information on releases at the facility.
- (2) Evaluating SWMUs and AOCs for release potential to all media, and evaluating regulated units, subject to Subpart F requirements, for release potential to media other than groundwater.

EP Contract No. 68- J-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

- 2 -

- (3) Making preliminary determinations regarding releases of concern and the need for further actions, including a Sampling Visit, RCRA Facility Investigation, and/or interim measures at the facility.
- (4) Screening from further investigations those SWMUs and AOCs that do not present a release potential.

The deliverable will be suitable for use by EPA in the administrative record for the facility.

#### PROJECTS AND TASKS

The project will consist of the following tasks:

Task 01 - Prepare a work plan. This will include all preliminary contacts, including the EPA Work Assignment Manager (EPA WAM) and state representative, required for the preparation of the work plan, and file searches at the Illinois EPA offices. The EPA WAM will review files at the Region V office.

Files to be reviewed include RCRA, NPDES, CERCLA, and Air Quality, as well as any Solid Waste files and emergency response or spill notifications.

At the request of the EPA WAM, the Kearney WAM will contact the facility to schedule the Visual Site Inspection (VSI). In addition, the EPA WAM has requested that the Kearney WAM coordinate the VSI with Illinois EPA representatives.

Task 02 - Conduct a Preliminary Review (PR) of the solid waste management units (SWMU) and all information obtained in the file review. The PR report will include the following:

- A brief background of the facility operations, location, environmental setting, groundwater monitoring and release history.
- A summary of each SWMU including description of unit; history of use and operation; types of wastes handled; description of release controls; history of any release from the unit; and information needs to be obtained through the VSI.

EP Contract No. 68-9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

- 3 -

- A list of references used in the preparation of the PR Report. Within each SWMU summary, the document which describes the types and volumes of wastes handled will be cross-referenced.

This task will include preparation of a VSI Agenda and Information Needs list to be sent to the facility prior to the VSI as an attachment to the VSI Notification letter. The VSI letter will be prepared on EPA letterhead by the Kearney Team and will be submitted to EPA for signature and distribution.

Task 03 - Prepare for and conduct the VSI. To prepare for the VSI, the Kearney Team will complete a Health and Safety Checklist to identify the activities and potential hazards at the site. The Health and Safety Checklist will be reviewed for approval by the Kearney Health and Safety Director, who will determine if the checklist is adequate or a site-specific Health and Safety Plan is necessary.

Prior to the VSI, the Kearney Team will discuss the agenda and goals of the VSI with the EPA WAM. The objectives of the VSI will include the following:

- Verify the information collected during the PR, including the location and condition of the SWMUs and AOCs;
- Identify any additional SWMUs and AOCs;
- Verify and obtain factual information to characterize properly all SWMUs and AOCs. Perform visual inspection and document field observations with photographs and field logs.
- Review site information with the facility representative and collect additional information to determine the need for further actions.
- Identify possible future sampling locations as appropriate; however, development of a sampling plan and performance of a sampling visit are not included within the scope of this work assignment.

EP Contract No. 68-w9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

- 4 -

This task includes preparation of the field equipment to be used during the VSI and development of a Health and Safety Checklist.

Task 04 - Prepare a PR/VSI Report according to the format presented in the Region V RFA - Related Scope of Work. In cases where information on similar SWMUs can be combined, tables will be developed instead of individual SWMU write-ups. In addition, a cover letter will accompany the PR/VSI Report. The PR/VSI report will be factual in nature and will be suitable for use as a part of the administrative record. The report submitted to Region V as the deliverable will not include draft permit conditions and fact sheets, since these will be prepared under a separate work assignment if necessary. As requested by the EPA WAM, a draft PR/VSI report will be submitted for comment. Revisions will be made in accordance to comments by the EPA WAM prior to submittal of the Final PR/VSI Report. The contractor will provide an original and two copies of the final PR/VSI Report.

This task also includes a meeting between the EPA WAM and the Kearney Team prior to completion of the PR/VSI report. The meeting may be held at the Regional office or by telephone at the EPA WAMs discretion.

Task 98 - Perform quality control review of draft deliverables.

Task 99 - Provide management oversight for the project.

#### HEALTH AND SAFETY PLAN

In preparing for the site visit, the Kearney Team will complete a checklist for the site to identify the activities and potential hazards at the site. Information to complete the checklist will be obtained from the Regional Project Officer and/or other EPA staff who are knowledgeable about the site and from the facility contact.

After the checklist has been completed, a determination will be made regarding the need for a health and safety plan for the site visit based on the anticipated hazards at the site. In cases where a health and safety plan is required, the Kearney Team will



EP Contract No. 68-03-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

- 5 -

develop a specific plan for the site and amend the work plan to include an additional task to provide for resources for plan development. In cases where no health and safety plan is required (i.e., minimal hazard potential), the Kearney Team will follow health and safety procedures as outlined in the Kearney Staff Protocol for site visits.

#### MONTHLY PROGRESS REPORTS

Information regarding the status of this project will be included in the monthly progress reports A.T. Kearney, Inc. provides to EPA. The information will address:

- Work completed to date,
- Difficulties encountered and remedial action taken,
- Anticipated activity during the subsequent reporting period, and
- Sufficiency of dollars and hours to complete the project.

#### QUALITY CONTROL PLAN

The KWAM will conduct milestone checks on each task. In addition, draft project deliverables will be reviewed by a senior technical staff member of DPRA, Inc. to ensure technical quality and consistency with EPA regulations and policy.

#### STAFFING AND MANAGEMENT

Greg Terdich of A.T. Kearney, Inc. will serve as the KWAM.

Individual staff responsibilities are shown in Attachment I. The proposed staffing and task assignments for the project are shown in Attachment II. Hour allocations are shown for each task.

All applicable Conflict of Interest Avoidance (COI) procedures have been adhered to for the proposed firms and staffs.

EP Contract No. 68-w9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

- 6 -

#### PERFORMANCE SCHEDULE

The project will be conducted according to the schedule shown in Attachment III.

#### COST ESTIMATE

The estimated cost for completing this project is included as Attachment IV.

#### BASIS FOR PERFORMANCE EVALUATION

The measures for evaluation of work assignment performance are described for each of the following performance criteria: technical quality; compliance with schedule; compliance with budget; and management. Measures for each of these criteria are discussed and agreed upon by the RPO and the WAM during the assignment planning process. To the extent possible, clear, quantitative measures should be established.

EP Contract No. 68-w9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

ATTACHMENT I

STAFF RESPONSIBILITY CHART

<u>STAFF</u>	<u>ROLE</u>	<u>AREAS OF RESPONSIBILITY</u>
A. Anderson	Technical Director	Management and oversight
G. Terdich	Work Assignment Manager Technical Staff	Day-to-day management and oversight; Conduct PR and VSI; Prepare PR/VSI Report
A. Anderson	Regional Liaison	Initiates work; monitors project planning and implementation; conducts project performance evaluation
L. Axe	Technical Staff	Conduct PR and VSI; prepare PR/VSI Report
M. Greenwood	Technical Staff	Conduct file review at IEPA; prepare PR/VSI Report
P. Martz	Technical Staff	Conduct file review at IEPA; prepare PR/VSI Report
P. Williams	Health & Safety Director	Health and Safety Checklist Review
B. Rohrer	Quality Control	Critical Review
A. Williams	Technical Assistant	Administrative support

EP Contract No. 68-w9-0040  
 Work Assignment No. R05-01-23  
 LTV Steel Company  
 Hennepin, IL  
 PR/VSI Report  
 EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
 June 30, 1989

## ATTACHMENT II

### STAFFING

STAFF			TASK						
Name	Firm	Labor	01	02	03	04	98	99	TOTAL
		1/ 2/ Category							
<u>Technical Director</u>									
A. Anderson	ATK	P4	6	-	-	-	-	12	18
<u>Work Assignment Manager</u>									
G. Terdich	ATK	P4	12	-	-	-	-	20	32
<u>Staffing</u>									
A. Anderson	ATK	P4	2	-	-	-	-	2	4
G. Terdich	ATK	P4	-	12	28	56	-	-	96
L. Axe	ATK	P2	-	48	32	96	-	-	176
P. Martz	ATK	P2	8	4	-	8	-	-	20
M. Greenwood	ATK	P1	8	20	-	22	-	-	50
P. Williams	ATK	P4	-	-	2	-	-	-	2
A. Williams	ATK	T1	8	-	-	-	-	12	20
Tech. Support	ATK		3	20	-	35	-	2	60
<u>Quality Control</u>									
B. Rohrer	DPRA	P4	-	-	-	-	20	-	20
Tech. Support	DPRA		-	-	-	-	2	-	2
TOTALS			47	104	62	217	22	48	500

1/ ATK = A. T. Kearney, Inc.  
 DPRA = DPRA, Inc.

2/ Labor Category (e.g., P4, P3)

3/ Task 98 - Quality Control

4/ Task 99 - Project Management

EP Contract No. 68-W9-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

ATTACHMENT III

SCHEDULE

<u>Task</u>	<u>Milestone #</u>	<u>Description</u>	<u>Scheduled Date</u>
01	01	Prepare work plan and conduct file review	06/30/89
02	02	Submit VSI Notification Letter to EPA	07/17/89
02	03	Submit Interim Preliminary Report to TD	07/20/89
02	04	Submit Interim Preliminary Report to EPA	07/21/89
03	05	Submit Health and Safety Check- list to Kearney Health and Safety Director	07/26/89
03	06	Conduct VSI	08/09-11/89
04	07	Conduct Meeting with EPA	08/14/89
04	08	Submit draft PR/VSI Report to QC	09/05/89
98	09	Submit QC comments to WAM	09/11/89
04	10	Submit draft PR/VSI Report to Technical Director	09/14/89
04	11	Submit draft PR/VSI Report to EPA	09/18/89
04	12	Receive EPA Comments	09/22/89
04	13	Submit final PR/VSI to Technical Director	09/25/89
04	14	Submit final PR/VSI Report to EPA	09/29/89
99		Project management	In accordance with above milestones

EP Contract No. 68-...-0040  
Work Assignment No. R05-01-23  
LTV Steel Company  
Hennepin, IL  
PR/VSI Report  
EPA I.D. No. ILD000781591

Work Plan Amendment No. 0  
June 30, 1989

ATTACHMENT IV

ESTIMATED COSTS

<u>A.T. Kearney, Inc.</u>	<u>Hours</u>	<u>Cost</u>
Labor	478	\$23,451
Other Direct Costs		2,100
Travel		<u>750</u>
Subtotal		\$26,301
 <u>DPRA, Inc.</u>		
Labor	22	\$ 1,543
Other Direct Costs		<u>75</u>
Subtotal		\$ 1,618
 SUBTOTAL		\$27,919
 <u>A.T. Kearney, Inc.</u>		
Fee - 3% Base		\$ 838
3% Award		<u>838</u>
Subtotal		\$ 1,676
 <u>TOTAL ESTIMATED COST</u>	<u>500</u>	<u>\$29,595</u>

AVERAGE TOTAL LABOR COST  
PER HOUR FOR ALL FIRMS \$49.99

2983E



DATE: June 4, 1987

TO: Enforcement Decision Group - Gary King/Enforcement

FROM: David S. Retzlaff - Region I

SUBJECT: 1558010001-- Putnam County  
LTV Steel Company  
ILD000781591  
Enforcement File

The purpose of this memo is to request clarification as to the regulated status of LTV Steel Company's Hennepin Works.

The basis for this request is as follows:

1. IEPA's Larry Eastep cited Jones & Laughlin Steel Corporation (now LTV Steel) for failure "to submit copies of your closure and/or post closure plan as requested under the Illinois Environmental Protection Act, Section 4(h)" in a letter to G. C. Smith dated July 13, 1984;
2. In a letter to Rama Chaturvedi/IEPA dated August 13, 1984 S. A. Green of LTV Steel stated "J & L intends to withdraw the previously submitted RCRA Part A Application..." This letter accompanied the closure plan for two 150,000 gallon storage tanks (as well as the injection well);
3. A letter dated August 30, 1984 from Karl Klepitsch/USEPA-Region V to S. A. Green of J & L Steel (LTV Steel) stated that after reviewing LTV Steel's Part A Permit Application it was unsure if the facility required a permit. The letter went on to explain that if LTV Steel could certify that they had never stored waste in the two tanks for a period longer than 90 days since November 19, 1980 that a permit was not required;
4. In a letter dated September 18, 1984 to Karl Klepitsch/USEPA, Mr. Green of LTV Steel stated that J & L Steel (LTV) wished to withdraw the Part A Application for Hennepin Works, as storage of hazardous waste for periods of 90 days does not occur at the Hennepin Works. The letter went on to state "while storage for periods of greater than 90 days is not a current practice, it is possible that such storage may have occurred since November 19, 1980. Accordingly, the closure plan for these facilities is enclosed as you requested";
5. In a November 20, 1984 letter to R. Chaturvedi and A. Vollmer/IEPA, Mr. Green of LTV Steel stated that LTV's intent was to operate the facility so that waste was not stored longer than 90 days and therefore withdrawal of Part A was requested of USEPA;

Mr. Green goes on to explain that a closure plan was submitted to USEPA with the request to withdraw their Part A as LTV could not certify that waste had never been stored longer than 90 days since November 19, 1980. "LTV Steel presently has no plans to remove these tanks from service as they are essential to Hennepin's continued operations. Similarly, decontamination of the acid storage facilities is not intended at this time as they are in continuing service and such efforts would be of no benefit"; and

RECEIVED

JUN - 8 1987

IEPA-DLPC



LTV Steel  
June 4, 1987  
Page 2

6. A letter to S. A. Green/Jones & Laughlin Steel dated December 3, 1984 from Larry Eastep/IEPA stated that the closure plan submitted on October 1, 1984 was approved.

Additionally, the FMP prepared by Jeanette Virgillio and dated June 24, 1986 contained the following:

Attachment 19, page 1, question #6 indicates that the two 150,000 gallon SO2 (storage tanks) units are closed. There is a note on page 2 that states "closure plan approved for closure of two 150,000 gallon K062 hazardous waste storage tanks (permitted for 90 days storage--generator status). No certification for closure received. Compliance Inquiry Letter to be sent by IEPA". Note that a CIL was never sent.

All above mentioned documents are attached.

Retzlaff conducted a CEI at this facility on May 13, 1987. He conducted the inspection as if the facility was a RCRA storage facility.

If EDG decides that this facility is a generator only, do they have to go through closure?

DSR/tl

cc: Division File  
Region 1  
Glenn Savage/FOS  
Steven Strauss/Enforcement

RECEIVED

JUN - 8 1987

IEPA-DLPC

Name of Preparer: Jeanette VirgilioDate: 6/24/86Model Facility Management Plan

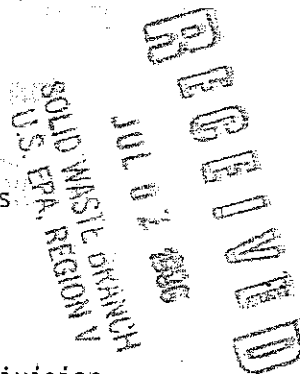
1. Facility Name: J & L Steel (LTV Steel) - Hennepin Works
2. Facility I.D. Number: ILD000781591
3. Owner and/or Operator: D.L. Wise, President - Western Division
4. Facility Location: State Route 71  
Street Address

<u>Hennepin</u>	<u>Putnam</u>	<u>Illinois</u>	<u>61327</u>
City	County	State	Zip Code

5. Facility Telephone (if available): (815) 925-2311
6. Interim Status and/or Permitted Hazardous Waste Units and Capacities of Each Unit:

<u>Type of Units</u>	<u>Size or Capacity</u>	<u>Active or Closed</u>
<u>X</u> Storage in Tanks or Containers	502 - 300,000 gal.	Closed *( 90 day storage)
<u>      </u> Incinerator		
<u>      </u> Landfill		
<u>      </u> Surface Impoundment		
<u>      </u> Waste Pile		
<u>      </u> Land Treatment		
<u>X</u> Injection Wells	D79 - 375,000 gal/day	Active
<u>      </u> Others (Specify)		

7. Permit Application Status: \_\_\_\_\_ (HWIMS action item number)



8. Identification of Hazardous Waste Generated, Treated, Stored or Disposed at the Facility: ( may attach Part A or permit list or reference those documents if listing of wastes is exceptionally long - in that case, to complete this question list wastes of greatest interest and/or quantity and note that additional wastes are managed)

<u>Type of Waste</u>	<u>Quantity</u>	<u>Generated, Treated, Stored or Disposed</u> (note appropriate categories)
----------------------	-----------------	--

See Attached Part A - Attachment A-1

Note: closure plan approved for closure of 2 - 150,000 gallon K062 hazardous waste storage tanks (permitted for 90 day storage -- generator status). No certification for closure received. Compliance Inquiry Letter to be sent by IEPA.

9. Review of Response to Solid Waste Management Questionnaire indicates: (check one)

☒ Solid Waste Management Units exist (other than previously identified RCRA units)

\*based on file review since no Questionnaire on file with IEPA.

☐ No Solid Waste Management Units exist (other than previously identified RCRA units)

☐ It is unclear from review of questionnaire whether or not any solid Waste Management Units exist

☐ Respondent indicates that does not know if any Solid Waste Management Units exist

10. If the response to question 9 is that Solid Waste Management Units exist, than check one of the following:

☐ Releases of hazardous waste or constituents have occurred or are thought to have occurred

☐ Releases of hazardous waste or constituents have not occurred

☐ Releases of hazardous waste or constituents have occurred or are thought to have occurred but have been adequately remedied

☒ It is not known whether a release of hazardous waste or constituents has occurred

11. The facility is on the National Priorities List or proposed update of the List or ERRIS list

\_\_\_\_\_ Yes - indicate List or update

  X   No

\_\_\_\_\_ Yes - ERRIS list

Prior to completion of the Recommendation portion of the Facility Management Plan, the attached Appendix must be completed.

12. Recommendation for Regional Approach to the Facility: Check one

  X   Further Investigation to Evaluate Facility

\_\_\_\_\_ Permit Compliance Schedule

\_\_\_\_\_ Corrective Action Order (may include compliance schedule)

\_\_\_\_\_ Other Administrative Enforcement

\_\_\_\_\_ Federal Judicial Enforcement

\_\_\_\_\_ Referral to CERCLA for Federally Financed or Enforcement Activity

\_\_\_\_\_ Voluntary/Negotiated Action

  X   State Action - UIC Permit or Closure/RFA

Brief narrative in explanation of selection :   See Attached  

  Executive Summary  

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- a) If further investigation alternative is selected: (RFA)

  X   Site inspection - anticipated inspection date \_\_\_\_\_ to be

State or Federal inspection \_\_\_\_\_ determined

  X   Preliminary Assessment - anticipated completion date \_\_\_\_\_

\_\_\_\_\_ RI/FS - anticipated date of initiation \_\_\_\_\_

State/Federal \_\_\_\_\_

Private Party \_\_\_\_\_ identify party(ies)

\_\_\_\_\_

b) If Permit Alternative is Selected: Projected Schedule

Date of Part B Submission: \_\_\_\_\_

Date of Completeness Check: \_\_\_\_\_

Date for Additional Submissions (if required): \_\_\_\_\_

Date of Completion of Technical Review: \_\_\_\_\_

Completion of Draft Permit/Permit Denial: \_\_\_\_\_

Public Notice for Permit Decision: \_\_\_\_\_

Date of Hearing (if appropriate): \_\_\_\_\_

Date for Final Permit or Denial Issuance: \_\_\_\_\_

Description of any corrective action provisions to be included in permit -

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

c) If Corrective Action Order Alternative is Selected:

Estimated Date for Order Issuance: \_\_\_\_\_

Description of Provisions of the Order to be Completed by  
Facility: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Description of Compliance Schedule to be Contained in Order:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d) If Other Administrative Enforcement Action is Selected:

Projected Date for Issuance of the Order: \_\_\_\_\_

Description of Provisions or Goals of the Order: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

e) If Judicial Enforcement Alternative Selected:

Date of Referral to Office of Regional Counsel: \_\_\_\_\_

f) If Referral to CERCLA for Action Selected:

Date of Referral to CERCLA Sections: \_\_\_\_\_

g) If Voluntary/Negotiated Action Alternative if Selected:

Date of Initial Contact with Facility: \_\_\_\_\_

Description of Goals of Contact or Discussions with  
Facility: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date for Termination of Discussions if Not Successful:

\_\_\_\_\_  
Date of Finalization of Settlement if Negotiation Successful:

\_\_\_\_\_

h) If State Action Alternative is Selected: - UIC Permit or Closure

~~Date for Referral to State:~~ \_\_\_\_\_

~~Name of State Contact:~~ \_\_\_\_\_

Phone: \_\_\_\_\_

RELEASED  
DATE 12/09  
BY 203-10  
INITIALS CA



FACILITY MANAGEMENT PLAN (FMP)  
J & L STEEL (LTV STEEL)  
EXECUTIVE SUMMARY

Jones and Laughlin/Hennepin Plant, currently operated by LTV Steel, processes steel into fabricated sheets and strips by cold rolling and galvanizing.

The steel mill began operations in 1967, which was coincidental with the construction and operation of an Industrial Waste Treatment Facility and a Deep Well Disposal Unit. Wastes generated from the above processes and facilities consist of the following waste streams and are managed on-site as described below:

1. "K062" Hazardous Waste - Waste pickle liquor is generated from two different sources. Hydrochloric acid is utilized as a pickling agent to remove oxides and scale from the surface of carbon steel fabricated at their plant. Chromic acid is used in galvanizing operations in order to apply a protective coating to the finished product. The combined spent acid waste streams are collected and stored in one of two 150,000 gallon storage tanks (one for emergency use) prior to either being recycled or reused on-site as a wastewater treatment chemical in their WWT Plant, sold to chemical or steel plants for reuse when the market warrants this option, or disposed of on-site via the deep injection well. Due to the May '86 Federal Register update to 40 CFR in which the K062 listed hazardous waste definition was clarified, J & L Steel's waste may no longer classify as a listed hazardous waste, due to their status as a steel fabricator and not a steel producer. However, analysis of samples taken of the waste pickle liquor indicate that the waste is characteristically hazardous due to corrosivity (pH < 1.0) and toxicity for heavy metals (see Attachments E-1: UIC Permit application forms and E-1A: Typical Waste Pickle Liquor Analysis included with UIC permit application).
2. Industrial Wastewaters - Washdowns, leakages, blowdowns and dumps of roll coolant solutions from the steel processing areas are collected in various floor drains and sumps that are connected to an industrial waste sewerage system that feeds into their wastewater treatment plant.
3. Treatment Plant Residues - The following wastes are generated from J & L's treatment operations:
  - a. treated effluent - discharged to the Illinois River;



- b. solids/sludges - original WWT Plant design included a sludge lagoon for final clarification, in addition to an adjacent disposal area for excess earth and sludges (see Attachment E-2a). However, no reference to the development or operation of this area through inspection reports could be found on file. The WWT Plant was later modified in 1975 by the addition of a dewatering facility (sludge thickener and filter press). The lagoon was removed from service in 1980 and the contents were pumped back into the dewatering facilities for treatment;
  - c. dewatered sludges - solids generated from the thickening and filtering facilities in the WWT plant are landfilled on-site in an abandoned quarry pit. The hazardous/non-hazardous status of the sludge is questionable due to no analysis on file; and
  - d. WWT oily residues - oil is separated and skimmed off the primary clarifier tanks and stored in a 20,000 gallon capacity holding tank prior to either shipment off-site for recovery, sale to operating gravel quarries for dust suppression purposes, or use on-site as a dust suppressant on the company's parking lots.
4. Waste Woods, Packaging Materials and Scrap Metal - temporarily stored in a 200 cubic yard earthen trench prior to transport off-site for disposal at Peru Municipal Landfill (scrap metal is reclaimed).
- (\*\*Note: For details of past and existing facilities, refer to Attachments E-2a, b, c, d, and e).

This site has been fully permitted for their waste management facilities since construction of the plant began. The Deep Injection Well and Industrial Wastewater Treatment facility was originally permitted from 1966 through 1972 (Permit Numbers 1966-EA-321 and 1966-EA-450) by the Illinois Public Health Department's Sanitary Water Board, in conjunction with the Illinois State Water Survey and Illinois State Geological Survey. The permit was then renewed in 1972 under the authority of the Clean Water Act through the Illinois EPA's Division of Water Pollution Control (Permit Numbers 1972-EA-1652-OP, 1975-EA-169-OP, 1976-EA-182-OP). In April of 1975, the facility was issued an NPDES Permit (No. IL0002631) by the USEPA, Region V, which was then implemented under IEPA authority in February of 1979 by the Divisions of Water and Land Pollution Control (NPDES Permit Number IL0001631 and UIC Permit Number 1979-UIC-1-OP). In November of 1980, J & L Steel filed a Part A permit application with the USEPA for storage in tanks (S02) and for an injection well (D79) of K062 pickle liquor. In August of 1984, J & L (LTV) submitted a closure plan for their storage tanks (in order to classify as a less than 90 day storage facility), in conjunction with an official Part A permit withdrawal request to the USEPA, Region V, in September, 1984. On December 3, 1984, the IEPA approved LTV's closure

plan for the storage tanks, however, to date no certification for closure has ever been received by the Agency. In regards to the permit status of the facility's UIC well, an application for a UIC permit was submitted to the IEPA in December of 1984. The application was deemed incomplete and a Notice of Incompleteness was sent to LTV in March, 1985. Additional information was submitted in May, 1985 for inclusion into the permit application. The permit was deemed complete, however, a technical review uncovered 113 deficiency items as identified in IEPA's letter dated May 28, 1986. LTV is currently operating without authorization-by-rule due to violations of 35 Ill. Adm. Code, Sections 704.144, 730.113(a)(3) and 704.144(f) (see attached copy of a CIL dated March 25, 1986, Attachment E-3) which specified Agency approval of annular fluid pressure or an alternative design to a packer by a February 1, 1985 compliance date in order for a facility to qualify for continued operations under a permit-by-rule. In addition, LTV has never responded to the Agency's Certification Request/Questionnaire in regards to the existence of Solid Waste Management Units or continuing or past releases.

#### Recommended Regional Approach:

The recommended regional approach for this facility is two-fold. In regards to the facility's RCRA activities, the Agency is recommending that the Class I UIC well be either permitted (if LTV can meet all the UIC requirements), or abandoned and closed. The permitting or abandonment of the disposal well will depend on LTV's cooperation.

In addition, the UIC disposal well activities may have to be modified in light of the upcoming State Hazardous Waste Landfill Ban (effective January 1, 1987) which includes UIC disposal. The closure of the two hazardous waste storage tanks will require certification. The IEPA shall initiate pre-enforcement activities and issue a Compliance Inquiry Letter to LTV Steel for violations of 35 Ill. Adm. Code, Sec. 725.215: Certification of Closure. Once closure of the tanks is certified, LTV will become a less than 90 day storage and a UIC facility. Until the UIC well is permitted or closed, LTV's Part A withdrawal request cannot be approved.

In regards to the solid waste management units on-site, the IEPA is recommending that an RFA (RCRA Facility Assessment) be conducted, primarily because J & L/LTV Steel have not responded to the SWMU Certification Questionnaire. In addition, there is no analytical data on file for the wastes generated and disposed of on-site. There is a question as to whether these wastes are hazardous or non-hazardous, particularly, since LTV also utilizes their waste pickle liquor as a coagulant and pH control agent in their WWT Plant. Any toxic metals present in the waste pickle liquor may also be present in the sludge generated from the treatment processes. It is highly recommended that samples of the facility's wastestreams be taken for analysis as part of the RFA. A RFA site inspection should be scheduled in order to identify any additional SWMU's located on-site, particularly, since there have not been any inspections of the sludge disposal unit and temporary storage trench since 1982, in addition to the size of the site itself, and J & L/LTV's refusal to respond to the SWMU Questionnaire. The scheduling of the RFA will be determined as funding and staffing become available.

JV:tk:5/5/1



FACILITY MANAGEMENT PLAN (FMP)  
J & L STEEL (LTV STEEL)  
EXECUTIVE SUMMARY

Jones and Laughlin/Hennepin Plant, currently operated by LTV Steel, processes steel into fabricated sheets and strips by cold rolling and galvanizing.

The steel mill began operations in 1967, which was coincidental with the construction and operation of an Industrial Waste Treatment Facility and a Deep Well Disposal Unit. Wastes generated from the above processes and facilities consist of the following waste streams and are managed on-site as described below:

1. **"K062" Hazardous Waste** - Waste pickle liquor is generated from two different sources. Hydrochloric acid is utilized as a pickling agent to remove oxides and scale from the surface of carbon steel fabricated at their plant. Chromic acid is used in galvanizing operations in order to apply a protective coating to the finished product. The combined spent acid waste streams are collected and stored in one of two 150,000 gallon storage tanks (one for emergency use) prior to either being recycled or reused on-site as a wastewater treatment chemical in their WWT Plant, sold to chemical or steel plants for reuse when the market warrants this option, or disposed of on-site via the deep injection well. Due to the May '86 Federal Register update to 40 CFR in which the K062 listed hazardous waste definition was clarified, J & L Steel's waste may no longer classify as a listed hazardous waste, due to their status as a steel fabricator and not a steel producer. However, analysis of samples taken of the waste pickle liquor indicate that the waste is characteristically hazardous due to corrosivity ( $\text{pH} < 1.0$ ) and toxicity for heavy metals (see Attachments E-1: UIC Permit application forms and E-1A: Typical Waste Pickle Liquor Analysis included with UIC permit application).
2. **Industrial Wastewaters** - Washdowns, leakages, blowdowns and dumps of roll coolant solutions from the steel processing areas are collected in various floor drains and sumps that are connected to an industrial waste sewerage system that feeds into their wastewater treatment plant.
3. **Treatment Plant Residues** - The following wastes are generated from J & L's treatment operations:
  - a. treated effluent - discharged to the Illinois River;

- b. solids/sludges - original WWT Plant design included a sludge lagoon for final clarification, in addition to an adjacent disposal area for excess earth and sludges (see Attachment E-2a). However, no reference to the development or operation of this area through inspection reports could be found on file. The WWT Plant was later modified in 1975 by the addition of a dewatering facility (sludge thickener and filter press). The lagoon was removed from service in 1980 and the contents were pumped back into the dewatering facilities for treatment;
  - c. dewatered sludges - solids generated from the thickening and filtering facilities in the WWT plant are landfilled on-site in an abandoned quarry pit. The hazardous/non-hazardous status of the sludge is questionable due to no analysis on file; and
  - d. WWT oily residues - oil is separated and skimmed off the primary clarifier tanks and stored in a 20,000 gallon capacity holding tank prior to either shipment off-site for recovery, sale to operating gravel quarries for dust suppression purposes, or use on-site as a dust suppressant on the company's parking lots.
4. Waste Woods, Packaging Materials and Scrap Metal - temporarily stored in a 200 cubic yard earthen trench prior to transport off-site for disposal at Peru Municipal Landfill (scrap metal is reclaimed).
- (\*\*Note: For details of past and existing facilities, refer to Attachments E-2a, b, c, d, and e).

This site has been fully permitted for their waste management facilities since construction of the plant began. The Deep Injection Well and Industrial Wastewater Treatment facility was originally permitted from 1966 through 1972 (Permit Numbers 1966-EA-321 and 1966-EA-450) by the Illinois Public Health Department's Sanitary Water Board, in conjunction with the Illinois State Water Survey and Illinois State Geological Survey. The permit was then renewed in 1972 under the authority of the Clean Water Act through the Illinois EPA's Division of Water Pollution Control (Permit Numbers 1972-EA-1652-OP, 1975-EA-169-OP, 1976-EA-182-OP). In April of 1975, the facility was issued an NPDES Permit (No. IL0002631) by the USEPA, Region V, which was then implemented under IEPA authority in February of 1979 by the Divisions of Water and Land Pollution Control (NPDES Permit Number IL0001631 and UIC Permit Number 1979-UIC-1-OP). In November of 1980, J & L Steel filed a Part A permit application with the USEPA for storage in tanks (S02) and for an injection well (D79) of K062 pickle liquor. In August of 1984, J & L (LTV) submitted a closure plan for their storage tanks (in order to classify as a less than 90 day storage facility), in conjunction with an official Part A permit withdrawal request to the USEPA, Region V, in September, 1984. On December 3, 1984, the IEPA approved LTV's closure

plan for the storage tanks, however, to date no certification for closure has ever been received by the Agency. In regards to the permit status of the facility's UIC well, an application for a UIC permit was submitted to the IEPA in December of 1984. The application was deemed incomplete and a Notice of Incompleteness was sent to LTV in March, 1985. Additional information was submitted in May, 1985 for inclusion into the permit application. The permit was deemed complete, however, a technical review uncovered 113 deficiency items as identified in IEPA's letter dated May 28, 1986. LTV is currently operating without authorization-by-rule due to violations of 35 Ill. Adm. Code, Sections 704.144, 730.113(a)(3) and 704.144(f) (see attached copy of a CIL dated March 25, 1986, Attachment E-3) which specified Agency approval of annular fluid pressure or an alternative design to a packer by a February 1, 1985 compliance date in order for a facility to qualify for continued operations under a permit-by-rule. In addition, LTV has never responded to the Agency's Certification Request/Questionnaire in regards to the existence of Solid Waste Management Units or continuing or past releases.

#### Recommended Regional Approach:

The recommended regional approach for this facility is two-fold. In regards to the facility's RCRA activities, the Agency is recommending that the Class I UIC well be either permitted (if LTV can meet all the UIC requirements), or abandoned and closed. The permitting or abandonment of the disposal well will depend on LTV's cooperation.

In addition, the UIC disposal well activities may have to be modified in light of the upcoming State Hazardous Waste Landfill Ban (effective January 1, 1987) which includes UIC disposal. The closure of the two hazardous waste storage tanks will require certification. The IEPA shall initiate pre-enforcement activities and issue a Compliance Inquiry Letter to LTV Steel for violations of 35 Ill. Adm. Code, Sec. 725.215: Certification of Closure. Once closure of the tanks is certified, LTV will become a less than 90 day storage and a UIC facility. Until the UIC well is permitted or closed, LTV's Part A withdrawal request cannot be approved.

In regards to the solid waste management units on-site, the IEPA is recommending that an RFA (RCRA Facility Assessment) be conducted, primarily because J & L/LTV Steel have not responded to the SWMU Certification Questionnaire. In addition, there is no analytical data on file for the wastes generated and disposed of on-site. There is a question as to whether these wastes are hazardous or non-hazardous, particularly, since LTV also utilizes their waste pickle liquor as a coagulant and pH control agent in their WWT Plant. Any toxic metals present in the waste pickle liquor may also be present in the sludge generated from the treatment processes. It is highly recommended that samples of the facility's wastestreams be taken for analysis as part of the RFA. A RFA site inspection should be scheduled in order to identify any additional SWMU's located on-site, particularly, since there have not been any inspections of the sludge disposal unit and temporary storage trench since 1982, in addition to the size of the site itself, and J & L/LTV's refusal to respond to the SWMU Questionnaire. The scheduling of the RFA will be determined as funding and staffing become available.

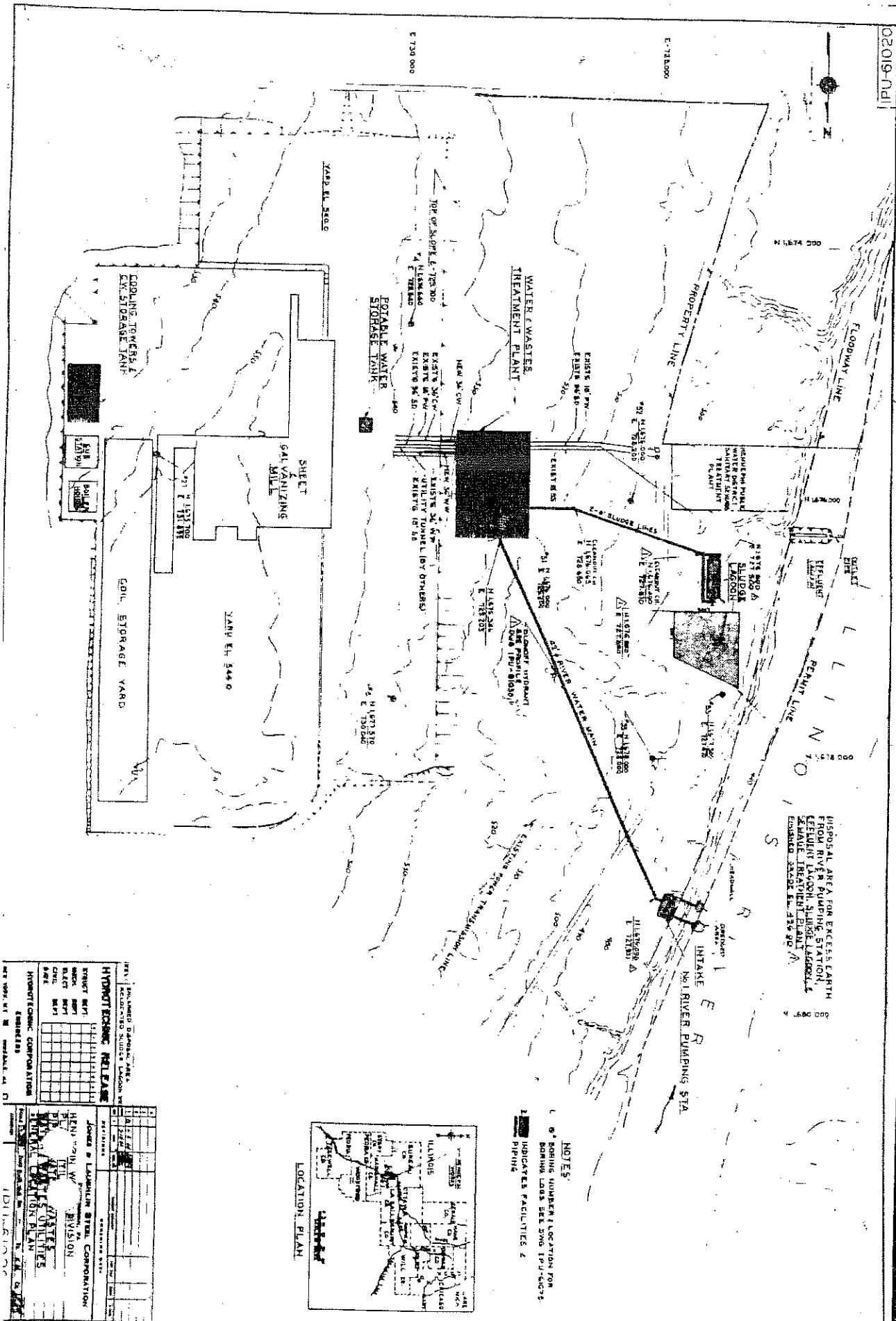


TABLE 2.0-1  
TYPICAL ANALYSES OF COMBINED WPL AND WASTE CHROMIC ACID  
HENNEPIN WORKS, ILLINOIS

	<u>mg/L</u>
Chromium (Cr)	13.7
Copper (Cu)	24.9
Lead (Pb)	0.4
Nickel (Ni)	19.6
Zinc (Zn)	2.8
Iron (Fe)	150,000
Chlorides (Cl)	250,000
Hydrochloric Acid, %	2.5
Specific Gravity	1.23

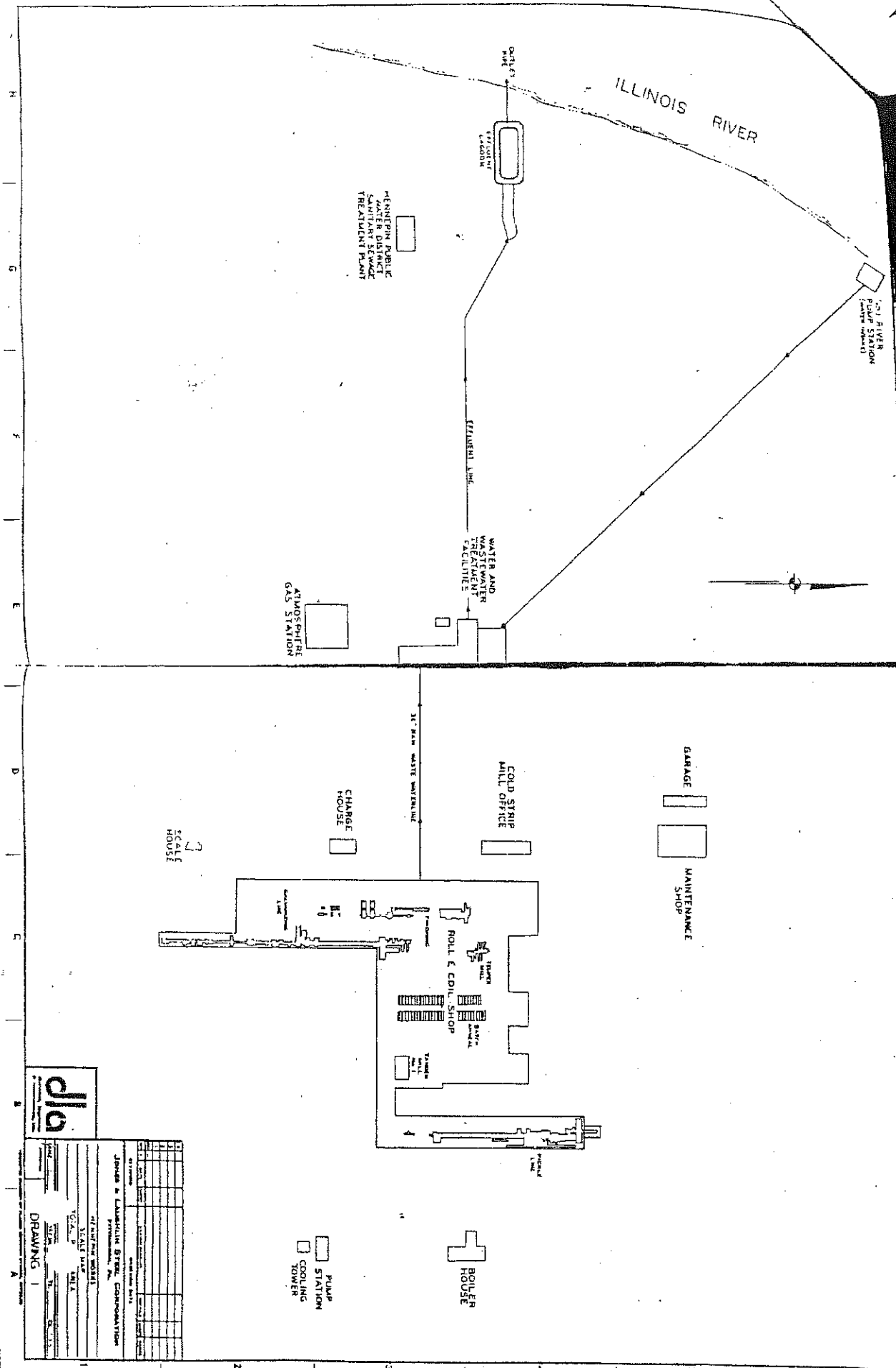






REVIEWS WITH T PLANT EXHIBITS  
311 Public Health Sanitary Section  
Board Room N.E. 1946 - RA-450

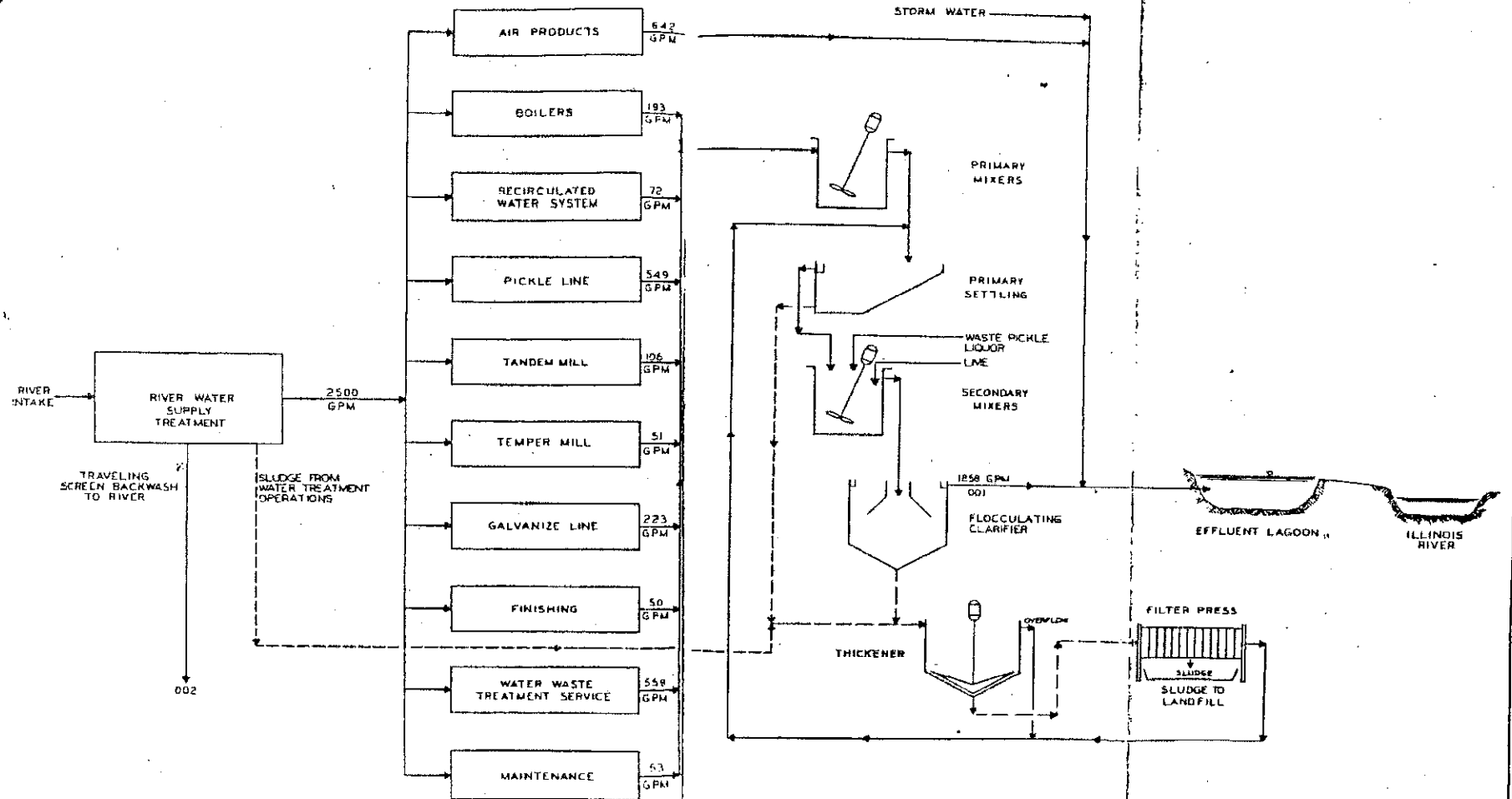
FMP - J & L Steel  
Attachment E-26



ENGINEER: W. W. L. L. L. L.  
AT J & L STEEL CO.  
NBBES PERMIT # 16002631

FMP - J.L. Steel  
Attachment E-12

EXISTING WWT FACILITIES  
AT J.L. STEEL CO.  
NPDES PERMIT NO.  
10002051 22



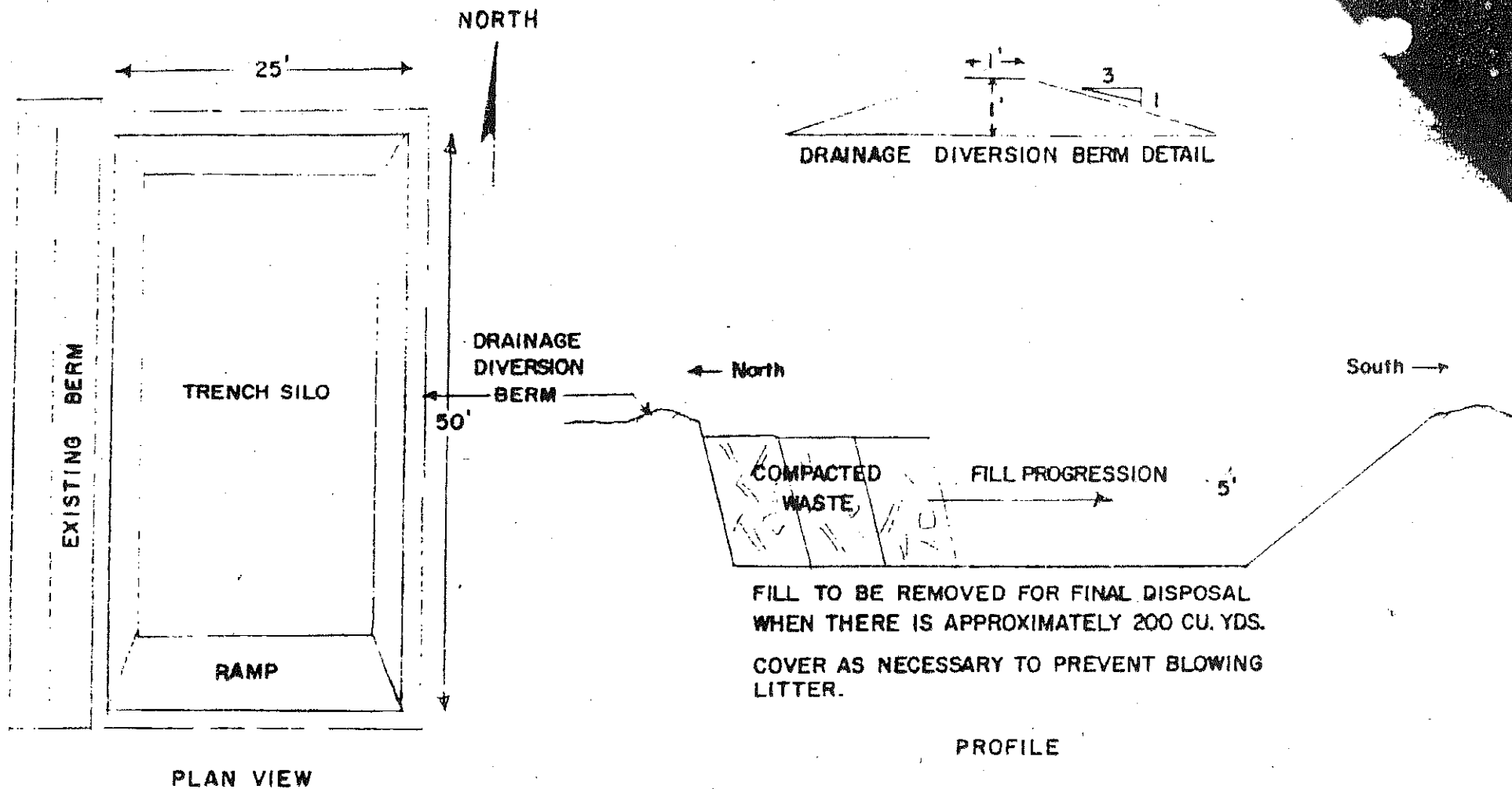
# LEGEND

— SLUDGE  
— WATER



NO.	DATE	DESCRIPTION	BY	CHKD.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

JONES & LAUGHLIN STEEL CORPORATION  
PITTSBURGH, PA.  
DRAWING 2



# TRENCH SILO TRANSFER STATION (Temporary Storage Trench)

SCALE AS SHOWN

IEPA PERMIT: 1980-8-0P-EX

EMP-414 Steel  
Attachment E-2d

AM COUNTY

LPC

15580105

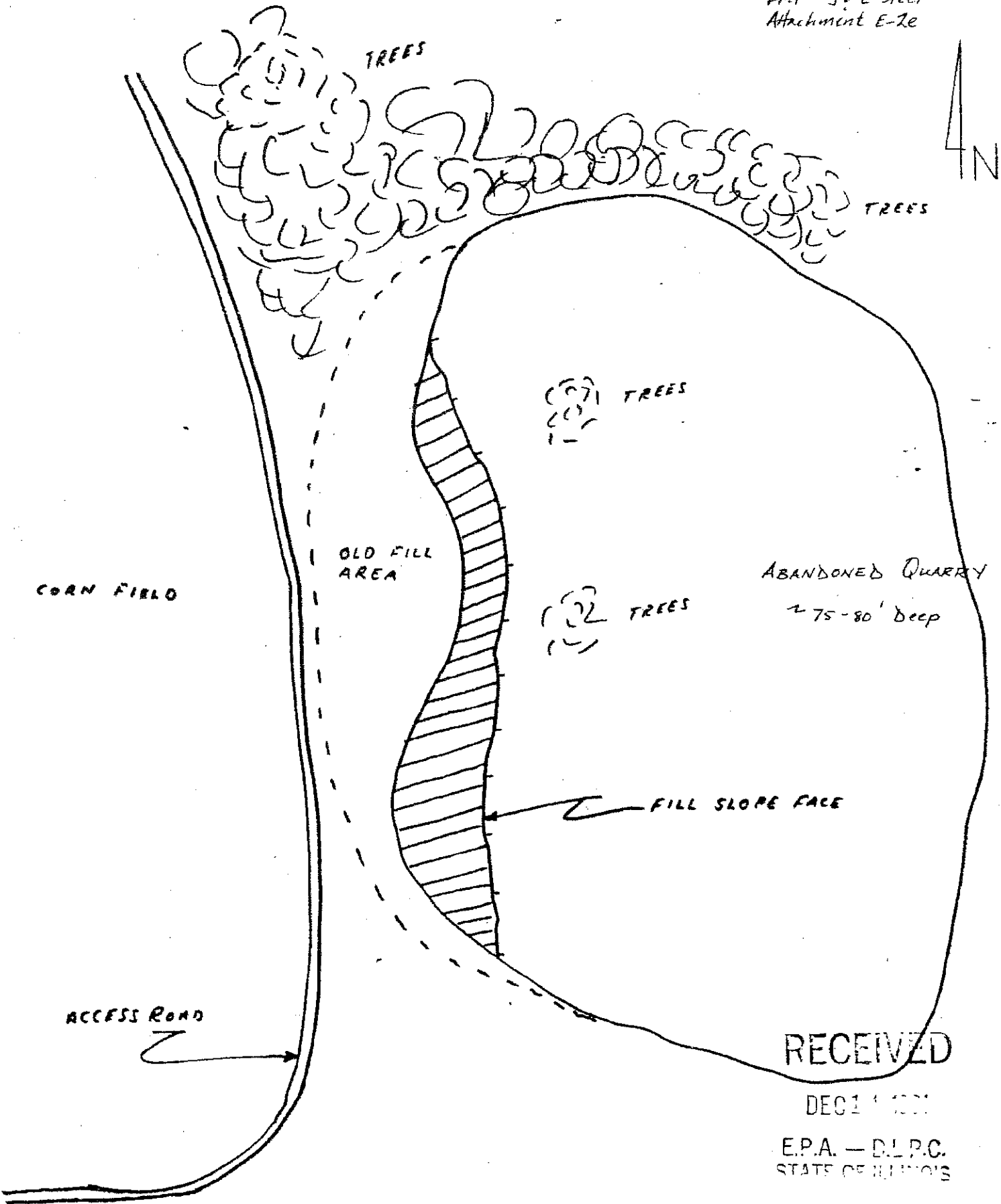
DATE: 12-02-81

HENNEPIN

TEL STEEL CORP.

TIME: 4:30 AM. To 5:00 AM.

FHP - J. L. Steel  
Attachment E-2e



NOT TO SCALE

24



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

41  
MEMORANDUM

TE: April 30, 1986

TO: Rama Chaturvedi/Permit Section

FROM: David S. Retzlaff and Robert A. Wengrow *RAW*

SUBJECT: FACILITY MANAGEMENT PLAN APPENDIX  
Questions 3-7 and Summary  
1558010006, 1558010005, 1558010007 - Putnam County  
Hennepin/Jones & Laughlin Steel (LTV Steel)  
ILD000781591

J & L Steel's activities involve cold rolling, pickling and galvanizing of sheet steel.

There is one complaint on file. On March 23, 1981 the complainant alleged that J & L Steel was dumping an unknown material into an abandoned gravel pit on their property. The activity was permitted by the State of Illinois.

There have been numerous inspections at J & L Steel. There have been nine (9) State Inspections, eleven (11) U.I.C. Inspections and two (2) RCRA -ISS Inspections.

There are currently two activities that are not regulated under RCRA. These are: (1) a wood and packaging transfer trench and (2) a wastewater treatment sludge disposal area. In addition, there is a Class I injection well on site.

There is no mention of dead vegetation in the files. There are two occasions where spills were noted. On July 15, 1982 the south storage tank failed and approximately 50,000 gallons of waste pickle liquor leaked into the cement capture tank. There is no indication that the material escaped the cement tank. The other incident was noted on May 23, 1984 when minor spillage had stained the concrete and gravel at the truck loading area.

There are no indications of the presence of underground tanks in the files. However, the waste pickle liquor transmission lines are located below grade in a cement tunnel.

DSR/tl

cc: Division File ✓  
Rockford Region  
Glen Savage/FOS  
Jeanette Virgilio/Permit Section

3. Description of Any Complaints from Public:

<u>Source of Complaint</u>	<u>Date</u>	<u>Recipient</u>	<u>Problem and Response</u>
Darryl Drennen - Putnam County Zoning	3/23/81	Wengrow	Unknown material being dumped by J & L Steel in abandoned gravel pit on J & L property. This site is permitted for wastewater treatment sludge disposal.

4. Description of All Inspection Reports for Facility:

<u>Date of Inspection</u>	<u>Inspector (Local, State, Federal)</u>	<u>Conclusions or Comments</u>
---------------------------	--	--------------------------------

See Attached.

5. During inspection of this facility did the inspector note any evidence of past disposal practices not currently regulated under RCRA such as piles of waste or rubbish, injection wells, ponds or surface impoundments that might contain waste or active, or inactive landfills?

X Yes -- give date if inspection and describe observation

10/9/80 - Wood and packaging transfer trench. Permitted by State.

10/9/80 - Wastewater treatment sludge disposal area. Permitted by State.

7-6-80

State of

7-6-80

6. Do inspection reports indicate observations of discolored soils or dead vegetation that might be caused by a spill, discharge or disposal of hazardous wastes or constituents?

☒ Yes - indicate date of report and describe observations  
7/15/82 - Waste pickle liquor spillage from south storage tank into concrete capture tank. No evidence of material escaping tank  
5/23/84 - Minor waste pickle liquor spillage on gravel near truck loading area.

☐ No

☐ Don't know

7. Do inspection reports indicate the presence of any tanks at the facility which are located below grade and could possibly leak without being noticed by visual observation?

☐ Yes - date of inspection and describe information in report

☒ No

☐ Don't know

8. Does a groundwater monitoring system exist at the facility?

9. If answer to question 8 is yes, is the groundwater system capable of monitoring both regulated RCRA units and other Solid Waste Management Units?

Explain -

10. Is the groundwater monitoring system in compliance with applicable RCRA groundwater monitoring standards?

If no, explain deficiency.





Question 4

<u>Date</u>	<u>Inspector</u>	<u>Conclusions &amp; Comments</u>
3/14/80	MAH-IEPA	No Violations
10/9/80	Loiselle-IEPA	No Violations
4/7/81	Johnson-IEPA	No Violation - sludge Disposal
4/7/81	Johnson-IEPA	No Violations - Wood Trench
7/13/81	Holzer-IEPA	No Violations - Sludge Disposal
7/13/81	Holzer-IEPA	No Violations - Wood Trench
12/3/81	Bardo-IEPA	No Violations - U.I.C.
12/2/81	Holzer-IEPA	No Violations - Wood Trench
12/2/81	Holzer-IEPA	No Final cover on completed portion - Sludge Disposal
3/10/82	Holzer-IEPA	No Violations - U.I.C.
7/15/82	Bardo-IEPA	No Violations - U.I.C.
1/24/83	Bardo-IEPA	No Violations - U.I.C.
9/22/83	Bardo-IEPA	No Violations - U.I.C.
5/23/84	Retzlaff-IEPA	No Violation - U.I.C.
7/11/84	Munger-IEPA	ISS - Violations of 725.113, 725.152, 725.115 & 725.114
9/17/84	Retzlaff-IEPA	No Violations - U.I.C.
12/5/84	Retzlaff-IEPA	No Violations - U.I.C.
3/19/85	Retzlaff-IEPA	U.I.C. Violation of 702.150 & 730.113
6/12/85	Retzlaff-IEPA	No Violations - U.I.C.
7/23/85	Retzlaff-IEPA	No Violations - ISS
9/10/85	Retzlaff-IEPA	No Violations - U.I.C.
11/20/85	Retzlaff, Gobleman, Filson-IEPA	No Violations - U.I.C.
2/19/86	Retzlaff, Dusenbury-IEPA	No Violations - U.I.C. - PIF

t1



Please print or type  
(fill-in areas are spaced for olive type, i.e., 12 characters each).

FMP - J.L. Steel  
Attachment E-1

FORM 1 GENERAL		EPA ILLINOIS ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION		I. USEPA I.D. NUMBER FIELD 000781591																																																																		
<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">I. EPA I.D. NUMBER</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">III. FACILITY NAME</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">V. FACILITY MAILING ADDRESS</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">VI. FACILITY LOCATION</div> </div> <div style="width: 65%; text-align: center; font-size: 24px; font-weight: bold;">PLEASE PLACE LABEL IN THIS SPACE</div> </div> </div>		<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: center; font-weight: bold;">FOR OFFICIAL USE ONLY</div> <div style="margin-top: 10px;"> Received: <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>  Reviewed: <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>  Reviewed: <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>  Complete: <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> Incomplete: <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span>  Data request: <span style="border-bottom: 1px solid black; display: inline-block; width: 50px;"></span> </div> </div>																																																																				
II. POLLUTANT CHARACTERISTICS																																																																						
<p><b>INSTRUCTIONS:</b> Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements.</p>																																																																						
SPECIFIC QUESTIONS		MARK "X" FORM ATTACHED		SPECIFIC QUESTIONS																																																																		
<p>A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)</p> <p>C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)</p> <p>E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)</p> <p>G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM OG3)</p> <p>I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> </tr> <tr> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> </table>		YES	NO	FORM ATTACHED		X		X						X				X							X						X	<p>B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)</p> <p>D. Is this a proposed facility (either than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)</p> <p>F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)</p> <p>H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)</p> <p>J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> </table>		YES	NO	FORM ATTACHED			X		X					X								X						X						X
YES	NO	FORM ATTACHED																																																																				
	X																																																																					
X																																																																						
X																																																																						
	X																																																																					
		X																																																																				
		X																																																																				
YES	NO	FORM ATTACHED																																																																				
		X																																																																				
	X																																																																					
X																																																																						
		X																																																																				
		X																																																																				
		X																																																																				
III. NAME OF FACILITY																																																																						
<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">1 SKIP</div> <div style="width: 70%;">HENNERLIN WORKS</div> </div> </div>																																																																						
IV. FACILITY CONTACT																																																																						
A. NAME & TITLE (last, first, & title)				B. PHONE (area code & no.)																																																																		
<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">2 GREEN STEPHEN A ENV ENGINEER</div> <div style="width: 70%;">216 622 6537</div> </div> </div>				<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">3 3100 EAST 45TH STREET</div> <div style="width: 70%;">CITY OR TOWN</div> </div> </div>																																																																		
V. MAILING ADDRESS																																																																						
A. STREET OR P.O. BOX																																																																						
B. CITY OR TOWN																																																																						
C. STATE D. ZIP CODE																																																																						
OH 44127																																																																						
VI. FACILITY LOCATION																																																																						
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER																																																																						
B. COUNTY NAME																																																																						
C. CITY OR TOWN																																																																						
D. STATE E. ZIP CODE F. COUNTY CODE (if known)																																																																						
IL 61327																																																																						

This Agency is authorized to require this information under Illinois Revised Statutes, 1978, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

## VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	3	2	1	7			
COLD ROLLED STEEL							
C. THIRD				D. FOURTH			
7				7			

## VIII. OPERATOR INFORMATION

A. NAME												B. IS THE NAME LISTED IN Item VIII-A also the owner?	
LTV STEEL COMPANY												<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)			
F - FEDERAL S - STATE P - PRIVATE M - PUBLIC (other than federal or state) O - OTHER (specify)										2 1 6 6 2 2 5 0 0 0			

E. STREET OR P.O. BOX											
P O BOX 6778											

F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
CLEVELAND										OH		44101		Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

## X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Waters)										D. PSD (Air Emissions from Proposed Sources)									
N I L 0 0 0 2 6 3 1										P									
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
U I L 0 0 0 2 6 3 1										15580-1 A A A									
C. RCRA (Hazardous Wastes)										F. OTHER (specify)									
R																			

## XI. MAP

Attach to this application a topographic map of the area extending to at least 1/4 mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

## XII. NATURE OF BUSINESS (provide a brief description)

COLD ROLLING, PICKLING, AND GALVANIZING OF SHEET STEEL.

## XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)		B. SIGNATURE		C. DATE SIGNED	
W. G. WILEY, JR. VICE PRESIDENT - ENGINEERING		W.G. Wiley		12-27-84	

## COMMENTS FOR OFFICIAL USE ONLY

C											
---	--	--	--	--	--	--	--	--	--	--	--

REVERSE

\* FACILITY OWNED BY JONES &amp; LAUGHLIN STEEL, INCORPORATED

FORM  <div style="font-size: 2em; font-weight: bold; text-align: center;">4</div> UTC	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY <u>UNDERGROUND INJECTION CONTROL PERMIT APPLICATION</u> GENERAL UTC PROGRAM REQUIREMENTS	I. US EPA I.D. NUMBER ILD000781591 II. IEPA I.D. NUMBER
This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Permit Management Center.		FOR OFFICIAL USE ONLY Received:        /    / Reviewed:       /    / Reviewer: Complete <u>      </u> Incomplete <u>      </u> Data request:    /    / Remarks:
III. WELL STATUS (mark "X") <input checked="" type="checkbox"/> A. Operating <input type="checkbox"/> B. Modification/Conversion <input type="checkbox"/> C. Proposed		
IV. TYPE OF PERMIT (mark "X" and specify if required) <input checked="" type="checkbox"/> A. Individual <input type="checkbox"/> 1. Emergency <input type="checkbox"/> B. Area    1. Number of wells: <u>      </u> 2. Name of field: <u>      </u> <input type="checkbox"/> 3. Emergency		
V. CLASS A. Class (enter code) <u>  1  </u>		
VI. LOCATION OF WELL (if area permit is requested, give the approximate center of the area) A. Township-Range-Section System of the Bureau of Land Management of the US Government (specify distance, direction, and number; circle pertinent direction where applicable) <u>390</u> feet north and <u>191</u> feet <del>XXXX</del> west of the <u>SE</u> corner of the <u>SW</u> quarter of the <u>SW</u> quarter of Section <u>3</u> , Township <u>32</u> North/ <del>XXXX</del> <u>XXXX</u> , Range <u>2</u> <del>XXXX</del> West of the <u>3</u> 'rd Principal Meridian, <u>PUTNAM</u> County, Illinois		
B. Lat. (degs, mins, secs) <u>41° 15' 52"</u>	C. Long. (degs, mins, secs) <u>89° 20' 02"</u>	D. Closest Municipality (name & county) <u>HENNEPIN, PUTNAM COUNTY</u>
VII. LAND OWNERSHIP (enter name of the site landowner if not the applicant or operator)		
A. Name and Title (last, first, & title)		B. Phone no. (area code & no.)
C. Street, P. O. Box, or Route		
D. City or Town	E. State	F. County
		G. Zip Code
H. Lease is to terminate on (month, day, and year):		
VIII. ATTACHMENTS (see instruction sheet)		
A. Application Forms (enter form numbers) <u>  1, 4a through 4g  </u>		
B. Are five copies of the Feasibility Report attached? (mark "X") <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (explain) <u>Five copies of the existing well technical report are attached</u>		
C. Are five copies of the Well Completion Report attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (explain) <u>Well completion report included in technical report.</u>		
D. Has the applicant applied to proper local government unit(s) to secure local siting approval? <input type="checkbox"/> Yes <input type="checkbox"/> No. Are two copies of such approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (explain) <u>Not applicable</u>		

Continued from front

**VIII. ATTACHMENTS (continued)**

- E. Is a certification of financial responsibility to close, plug and abandon the well attached? (mark "X")** ☒ Yes ☐ No (explain) Included in technical report

**IX. ILLINOIS STATE LEGISLATIVE REQUIREMENTS (see instruction sheet)**

(Applicable to hazardous waste disposal sites except those publicly-owned sewage works or the disposal or utilization of sludge from publicly-owned sewage works.)

- A. Is the proposed or existing hazardous waste disposal site located: (mark "X")**
1. above an active or inactive shaft or tunneled mine or within 2 miles of an active fault in the earth's crust? ☐ Yes ☒ No
  2. in a county populated with less than 225,000:
    - a. within 1½ miles of the corporate limits as defined on June 30, 1978 of any municipality? ☒ Yes ☐ No If "Yes" has approval been given by the governing body of the municipality in an official action? ☐ Yes ☒ No
    - b. within 1000 feet of an existing private well or the existing source of a public water supply measured from the boundary of the actual active permitted site and excluding existing private wells on the property of the permit applicant.  
☐ Yes ☒ No

**X. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I swear that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

**A. NAME & OFFICIAL TITLE (print or type)**  
W. G. WILEY, JR., VICE PRESIDENT - ENGINEERING

**B. PHONE NO. (area code & no.)**

**C. SIGNATURE**

*W. G. Wiley, Jr.*

**D. DATE SIGNED**

*12-27-84*





Continued from front

**VIII. CONFINING ZONE**

A. Geologic name(s) of confining zone: EAU CLAIRE SHALE FORMATION

B. Depth to confining zone is from 2705 feet to 2900 feet or \_\_\_\_\_ meters to \_\_\_\_\_ meters beneath land surface.

C. Characteristics of confining zone:

1. Type (lithology): SHALE AND SILTSTONE

2. Fracture pressure (psi)	3. Intrinsic permeability (millidarcy)	4. Hydraulic conductivity (feet/day)	5. Are alternative confining zones proposed in a report? (mark "X") <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain or specify depth interval(s): _____
2018	1.0 X 10 <sup>-4</sup>	3 X 10 <sup>-7</sup>	
(bar)		(cm/sec)	

**IX. OVERLYING SOURCES OF GROUND WATER**

A. Characteristics of the basal aquifer which overlies the confining zone at the site:

1. Elevation at top of aquifer (feet msl)	2. Potentiometric surface (feet/msl)	3. TDS (mg/l or ppm)	4. Type (lithology): <u>SANDSTONE</u> <u>GALESVILLE</u>
2700	535	15,000	
(meter msl)	(meter msl)		5. Velocity and flow direction of formation water: <u>UNKNOWN</u>

B. Underground Sources of Drinking Water (USDW):

1. Are maps and cross sections as required in Section 730.114(a)(4) or 730.134(a)(4) included in a report? (mark "X") ☒ Yes (specify) SECTIONS 4 AND 5  
☐ No (explain) IN ATTACHED TECHNICAL REPORT

2. Lowest depth of USDW: 2380 feet or \_\_\_\_\_ meters.

3. Elevation of the potentiometric surface of the lowest USDW: 557 feet msl.  
or \_\_\_\_\_ meters msl.

4. Distance to nearest down gradient water supply well is > 1/4 MILE or \_\_\_\_\_ meters.

**X. MINERALS AND HYDROCARBONS**

A. Are there any currently or potentially extractable mineral or hydrocarbon deposits beneath the site? ☒ No ☐ Yes (specify type(s) and depth interval(s)) \_\_\_\_\_

**XI. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (print or type)

W. G. WILEY, JR., VICE PRESIDENT - ENGINEERING


B. PHONE NO. (area code & no.)

C. SIGNATURE

W. G. Wiley, Jr.

D. DATE SIGNED

X 12-27-84

<b>FORM</b>  <b>4b</b>  <b>UIC</b>	 <b>IEPA</b>	<b>ILLINOIS ENVIRONMENTAL PROTECTION AGENCY</b> <b>UNDERGROUND INJECTION CONTROL PERMIT APPLICATION</b>  <b>INJECTION WELL DESIGN,</b> <b>CONSTRUCTION, TESTS and LOGS</b>	<b>I. US EPA I.D. NUMBER</b> ILD 000781591  <b>II. IEPA I.D. NUMBER</b>  								
This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.			<b>FOR OFFICIAL USE ONLY</b>  Received:        /    / Reviewed:       /    / Reviewer: Complete <u>      </u> Incomplete <u>      </u> Data request:    /    / Remarks:								
<b>III. SURFACE ELEVATION</b>		<b>IV. WELL DEPTH</b>									
<table border="1" style="width: 100%;"> <tr> <th style="width: 50%;">(feet msl)</th> <th style="width: 50%;">(meters msl)</th> </tr> <tr> <td style="text-align: center;">519</td> <td></td> </tr> </table>	(feet msl)	(meters msl)	519			<table border="1" style="width: 100%;"> <tr> <th style="width: 50%;">(feet)</th> <th style="width: 50%;">(meters)</th> </tr> <tr> <td style="text-align: center;">4868</td> <td></td> </tr> </table>	(feet)	(meters)	4868		
(feet msl)	(meters msl)										
519											
(feet)	(meters)										
4868											
<b>V. ANTICIPATED FRACTURING PRESSURE (if applicable)</b> 2787        psi or        kg/cm <sup>2</sup>											
<b>VI. EXPECTED SERVICE LIFE OF WELL:</b> <u>≥ 20</u> years FROM PRESENT											
<b>VII. INJECTION WELL IS (HAS) COMPLETED BY (mark "X")</b> <input checked="" type="checkbox"/> open hole <input type="checkbox"/> fully cased and perforated <input type="checkbox"/> screen and gravel pack <input type="checkbox"/> other (specify) _____											
<b>VIII. ARE SCHEMATIC OR OTHER APPROPRIATE DRAWINGS OF THE SURFACE AND SUBSURFACE CONSTRUCTION DETAILS OF THE WELL GIVEN IN A REPORT?</b> <input checked="" type="checkbox"/> Yes (specify) <u>FIGURE 8.0-1</u> <input type="checkbox"/> No (explain) <u>IN ATTACHED TECHNICAL REPORT.</u>											
<b>IX. WELL DESIGN AND CONSTRUCTION</b>											
<b>A. Indicate the well hole diameters at the corresponding depth intervals:</b>											
Depth (feet)	300	2703	3257	4823	4868						
Diameter (in)	17-1/2	12-1/4	8-3/4	7-7/8	6-1/4						
<b>B. Casings</b>											
	depth interval (feet)	O.D. (in.)	I.D. (in.)	weight (lb/ft)	grade (API)	design coupling	coupling O.D. (in.)				
1. Surface casing	300	13-3/8	12.72	48	H-40	8 rd.STC	14.375				
2. Intermediate casing(s)	2703	9-5/8	8.921	36	J-55	8 rd.STC	10.625				
3. Long-string casing	3066	7"	6.366	23	J-55	8 rd.STC	7.656				
<b>C. Cement</b>											
	depth interval (feet)	type/grade		additives	quantity (cu.yd.)	circulated (yes or no)					
1. Surface casing	300	CLASS A		-	300 SX	NO					
2. Intermediate casing	2703	CLASS A		-	1012 SX	YES					
3. Long-string casing	3066	50/50 POZMIX			580 SX	YES					
				LA-2	40 GAL.						

Continue on reverse 4

Continued from front

# IX. WELL DESIGN AND CONSTRUCTION (continued)

4. Cementing technique(s): BALANCE METHOD AND SQUEEZED

## D. Injection tubing

type/grade (API)	O.D. (in)	I.D. (in)	weight (lb/ft)	joint specification	depth interval (ft)
FIBER CAST	4-1/2	4	4.7	MFG. STD.	3091
			(AIR)		

1. Maximum allowable suspended weight based on joint strengths to design of injection tubing:	(lb) 12,500	(kg)
2. Weight of injection tubing string (axial load) to design:	(lb) 10,061	(kg)

## E. Annulus protection system

- Annular space(s): (specify area(s)) 15.9 IN
- Type of annular fluid(s): FRESH WATER WITH CORROSION AND MICROBIAL INHIBITORS

3. Will fluid seal(s) be used as an alternative to packer(s)? (mark "X")

☒ Yes (see instructions) or ☐ No (complete Item 4 below)

## 4. Packer(s)

setting depth		type	name and model
(feet)	(meters)		

# X. TESTS AND LOGS (list logs and tests for A. through C.; attach copies)

A. During drilling: DUAL INDUCTION-LATERLOG  
COMPENSATED FORMATION DENSITY-GAMMA  
TEMPERATURE  
POROSITY

} copies on file with ISCS

B. During and after casing installation: CALIPER LOGS  
MICROLOG  
SONIC CALIPER  
RAT

} copies on file with ISGS

C. Demonstration of mechanical integrity: MECHANICAL INTEGRITY TESTING WAS PERFORMED  
OCTOBER 23, 1983; SUBMITTED NOVEMBER 15, 1983.

# XI. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (print or type)

W. G. WILEY, JR., VICE PRESIDENT-ENGINEERING


B. PHONE NO. (area code & no.)

C. SIGNATURE

W. G. Wiley, Jr.

D. DATE SIGNED

12-27-84

FORM <b>4c</b> UIC	 <b>IEPA</b>	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY <b>UNDERGROUND INJECTION CONTROL PERMIT APPLICATION</b> <b>OPERATION PROGRAM and SURFACE FACILITIES</b>	I. US EPA I.D. NUMBER ILD 000781591 II. IEPA I.D. NUMBER
This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.			FOR OFFICIAL USE ONLY Received: / / Reviewed: / / Reviewer: Complete Incomplete Data request: / / Remarks:
III. OPERATION PROGRAM			
A. Area injection project (if applicable) NOT APPLICABLE			
1. Fluid to be injected: MGD or bbls/day			
2. Years remaining in area injection project: years			
3. Anticipated total number of injection wells required:			
4. Injection wells operate with common manifold (mark "X") <input type="checkbox"/> Yes <input type="checkbox"/> No			
5. Number of injection zone monitoring wells:			
6. Number or name and location of injection wells currently in project:			
number/name		location (see instructions)	
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			
j.			
B. Single injection well (if an area permit is applied for, fill in for a typical well)			
1. Number or name of well: NO. 1		2. Location (see instructions) PUTNAM, T32N, R2W, 3.7a	
3. Expected service life (years): 20 yrs		4. Operation in 24 hour period (hours): 12-24*	
5. Operation in a month (days): 4-5*			
6. Injection pressure (psi) (kg/cm <sup>2</sup> )		7. Injection rate (gpm) (bbls/day)	
a. average		a. average	
b. maximum		b. maximum	
8. Casing-tubing annulus pressure: 25*** psi or kg/cm <sup>2</sup>			
9. Other annulus pressure (specify area) NONE at psi or kg/cm <sup>2</sup>			
10. Injection well(s) monitoring (mark "X") <input checked="" type="checkbox"/> separate monitoring system <input type="checkbox"/> manifold monitoring <input type="checkbox"/> other (specify)			
IV. SURFACE FACILITIES			
A. Injection fluid storage			
1. Storage capacity: a. 10 days		b. 300,000 GAL.	

Continued from front

**A. Injection fluid storage (continued)**

2. Type of storage facility(s): TWO RUBBER-LINED CARBON STEEL TANKS, EACH WITH 150,000 GALLONS CAPACITY.

3. Is the storage facility(s) suitable to store injection fluid in case of failure of injection well(s) (mark "X") ☒ Yes ☐ No (explain)

B. Holding tanks and flow lines (describe briefly): SEE SECTION 2.3 IN ATTACHED TECHNICAL REPORT.

**C. Filter(s)**

location:

1. (2) DIATOMACEOUS EARTH

2.

3.

type:

AT WWTP

name:

PRESSURE LEAF

model no.:

DURIRON (ENZINGER)

capacity (gpm):

48 HC 354/405

pore size (micron):

> 206

**D. Injection pump(s)**

1. WATER PUMPS (2)

2.

3.

location:

AT WWTP

type:

TRIPLEX POSITIVE

name:

DISPLACEMENT

model no.:

FWI

capacity (gpm):

P-200A

**V. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (print or type)

W. G. WILEY, JR., VICE PRESIDENT-ENGINEERING



B. PHONE NO. (area code & no.)

C. SIGNATURE

*W. G. Wiley, Jr.*

D. DATE SIGNED

*12-27-84*

FORM  <div style="font-size: 2em; font-weight: bold;">4d</div>  VIC	 <div style="font-size: 1.5em; font-weight: bold;">IEPA</div>	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY <u>UNDERGROUND INJECTION CONTROL PERMIT APPLICATION</u>  AREA of REVIEW	I. US EPA I.D. NUMBER ILD 000781591 II. IEPA I.D. NUMBER
This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.			FOR OFFICIAL USE ONLY  Received:        /    / Reviewed:       /    / Reviewer: Complete _____ Incomplete _____ Data request:    /    / Remarks:
III. RADIUS OF THE AREA OF REVIEW: <u>13,200</u> feet or _____ meters			
IV. METHOD OF DETERMINATION OF RADIUS (mark "X")  <input checked="" type="checkbox"/> Fixed radius <input type="checkbox"/> Equation given in Section 730.106(a) <input type="checkbox"/> Other (specify) _____ _____ _____			
V. IS A MAP WITH THE INFORMATION REQUIRED IN SECTION 730.114(a)(2) OR 730.134(a)(2) INCLUDED IN A REPORT? (mark "X") <input checked="" type="checkbox"/> Yes (specify) <u>TOPOGRAPHIC MAP, FIGURE 4.0-1</u> <input type="checkbox"/> No (explain) _____			
VI. ANTICIPATED INJECTION FLUID MOVEMENT (briefly describe the calculated lateral movement of the injected fluid front and the distance from the center of the applicable well, field, project or area) RADIAL MOVEMENT OF WASTE FLUID WAS CALCULATED BASED ON RESEVOIR PROPERTIES INCLUDED AS SECTION 6.0 IN THE ACCOMPANYING TECHNICAL REPORT AND A CUMULATIVE WASTE VOLUME FROM THE OPERATION START-UP IN 1968 TO A PROJECTED 20 YRS. FROM PRESENT. CALCULATION BASED ON CONTINUOUS WELL OPERATION REFLECTING EXTREME CASE. 20 YR. WASTE FRONT RADIUS = 817' FROM WELLBORE.			
VII. WELLS WITHIN THE AREA OF REVIEW			
A. Is a tabulation of data on all wells as required in Section 730.114(a)(3) or 730.134(a)(3) included in a report? (mark "X") <input checked="" type="checkbox"/> Yes (specify) <u>SECTION 9.0</u> <input type="checkbox"/> No (explain) <u>IN ATTACHED TECHNICAL REPORT.</u>			
B. Number of wells within the area of review and penetrating the injection zone which are:  1. properly plugged and abandoned <u>NONE</u> 2. temporarily abandoned <u>NONE</u> 3. operating <u>ONE</u> 4. improperly plugged and/or abandoned <u>NONE</u>			
C. Is the proposed corrective action to be taken for the number of defective (Item B.4. wells above included in a report? (mark "X") <input checked="" type="checkbox"/> Yes (specify) <u>SECTION 9.0</u> <input type="checkbox"/> No (explain) <u>IN ATTACHED TECHNICAL REPORT.</u>			
VII. CERTIFICATION <small>I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.</small>			
A. NAME & OFFICIAL TITLE (print or type) <u>W. G. WILEY, JR., VICE PRESIDENT-ENGINEERING</u>		B. PHONE NO. (area code & no.) _____	
C. SIGNATURE 		D. DATE SIGNED <u>12-27-84</u>	



FORM

4e

UIC



IEPA

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**  
**UNDERGROUND INJECTION CONTROL PERMIT APPLICATION**  
**MONITORING, INTEGRITY TESTING**  
**and CONTINGENCY PLAN**

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

I. US EPA I.D. NUMBER

ILD000781591

II. IEPA I.D. NUMBER

**FOR OFFICIAL USE ONLY**

Received: / /

Reviewed: / /

Reviewer:

Complete      Incomplete     

Data request: / /

Remarks:

**III. MONITORING PROGRAM****A. Sampling frequency of fluid to be injected:**Weekly**B. Parameters for injection fluid analyses** % acid, TDS, pH, 4  
chlorides, sp. gravity, viscosity, temperature, Fe, C +6,**C. Sampling location (mark "X")** ☐ manifold ☒ individual well(s)**D. Recording devices (specify location, name and model, mechanical or electrical if applicable, and whether continuous or non-recording)****1. Injection pressure gauges:**a. All are continuous, electrical Fisher-Porter recordersb. with Rosemount transmitters. All located in control room.c. d. **2. Casing-tubing annulus pressure gauges:**a. All are continuous, electrical Fisher-Porter recordersb. with Rosemount transmitters. All located in control room.c. d. e. f. **3. Flow meters:**a. All are continuous, electrical Fisher-Porter recordersb. with Fisher-Porter magnetic flow meters. All located in control room.c. d. e. f. **4. pH recording devices:**a. b. c. d.



Continued from front

**D. Recording devices (continued)**

**5. Temperature**

- a. Monitored in storage tanks. All are continuous, electrical
- b. Fisher-Porter recorders. All located in control room.
- c. \_\_\_\_\_
- d. \_\_\_\_\_

**E. Monitoring of USDWs within the area of review**

- 1. Number of wells: \_\_\_\_\_
- 2. Type of wells: \_\_\_\_\_
- 3. Frequency of monitoring: \_\_\_\_\_
- 4. Parameters (specify): \_\_\_\_\_

**5. Are location maps and well logs included in a report? (mark "X")**

- ☒ **Yes (specify)** Location Maps ☐ **No (explain)** Logs on file at ISGS. Location map in attached technical report.

**IV. MECHANICAL INTEGRITY TESTS DURING SERVICE LIFE OF WELL**

**(Briefly describe procedure; include frequency of testing)**

Radioactive Tracer Survey (RAT) including Gamma-Ray and casing collar log run on 10/24/83 and a caliper log on 10/20/83. Radioactive tracer material was pumped down annulus between long string casing and injection tubing. Repeated logging runs were made to verify integrity of casing and cement.

**V. CONTINGENCY PLAN FOR WELL FAILURE OR SHUT IN (briefly describe procedure)**

In the event of a failure which prevents injection, the well will be shut-in for necessary corrective maintenance. Waste acid will be stored on-site using existing storage tanks and/or sent off-site for recovery or proper treatment/disposal. A minimum of 10 days storage is typically present. Refer to Section 2.6 of attached technical report.

**VI. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

**A. NAME & OFFICIAL TITLE (print or type)**

W. G. Wiley, Jr., Vice President-Engineering

**B. PHONE NO. (area code & no.)**

**C. SIGNATURE**

W. G. Wiley, Jr.

**D. DATE SIGNED**

12-27-84

FORM  <div style="font-size: 2em; font-weight: bold;">4f</div>  UIC	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY <u>UNDERGROUND INJECTION CONTROL PERMIT APPLICATION</u> CHARACTERISTICS, COMPATIBILITY and PRE-INJECTION TREATMENT of INJECTION FLUID	I. US EPA I.D. NUMBER ILD000781591 II. IEPA I.D. NUMBER  
This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.		FOR OFFICIAL USE ONLY Received:        /    / Reviewed:       /    / Reviewer: Complete <u>      </u> Incomplete <u>      </u> Data request:    /    / Remarks:
III. NUMBER OF COMPONENT STREAMS FORMING INJECTION FLUID: <u>2</u>		
IV. SOURCE(s) AND GENERATION RATE (gpm) OF COMPONENT STREAMS:		
<u>pickle line 20 gpm</u>		
<u>galv. line 10 gpm (batch)</u>		
V. VOLUME OF INJECTION FLUID GENERATED DAILY: <u>30,000</u> gallons <div style="text-align: right;">bbls</div>		
VI. PHYSICAL AND CHEMICAL CHARACTERISTICS OF INJECTION FLUID (attach complete analyses)		
A. Generic waste/fluid name: <u>waste acid-waste pickle liquor, chromic acid waste</u>		
B. Fluid phase (mark "X") <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> Other (specify) _____		
C. Toxicity: <u>X</u> D. Reactivity: _____    E. Corrosiveness: <u>X</u> F. Radioactivity: _____ (specify percentage or values as appropriate)		
G. Flash point: <u>N/A</u> °F or _____ °C    H. Organics: _____ % or _____ mg/l		
I. TDS: <u>300,000</u> mg/l	J. pH: <u>&lt; 1</u>	K. Temperature: <u>80-100</u> °F    _____ °C
		L. Density: _____ gm/cm <sup>3</sup>
		M. Specific gravity: <u>1.23</u>
N. Micro organisms (specify and quantify): <u>Not applicable</u>		
O. Chemical persistence: _____		
P. Key component name: (specify hazardous waste number if applicable) Percent or mg/l		
1. <u>waste pickle liquor</u>		<u>99</u>
2. _____		_____
3. _____		_____
4. _____		_____
5. _____		_____
6. _____		_____
7. _____		_____
8. _____		_____
VII. INJECTION FLUID COMPATIBILITY (discuss corrosiveness, reactivity, and by-products)		
A. Fluid in the injection zone: <u>waste fluid compatible with formation fluid as verified by successful operating history.</u>		

Continued from front

**VII. INJECTION FLUID COMPATIBILITY (continued)**

B. Minerals in the injection zone: silica-cemented quartz sandstone

C. Minerals in the confining zone: glauconitic and micaceous shale and siltstone

D. Components of the injection well(s):

1. injection tubing: Fibercast injection tubing - corrosion resistant

2. long string casing: Carbon steel

3. cement(s): Class A

4. annular fluid(s): Fresh water with corrosion and microbial inhibitors

5. packer(s): Not applicable

6. well-head equipment: Dow Lined Cross and Fibercast hanger assembly

7. holding tank(s) and flow lines: rubber-lined steel tanks; Saran-lined steel flow lines

E. Is the compatibility of the injection fluid with Items VIIA. through D. fully described in a report? (mark "X") ☒ Yes (specify) See Technical Report ☐ No (explain)

**VIII. PRE-INJECTION FLUID TREATMENT(s) (list processes, describe briefly)**

Waste acid is collected and conveyed to WP1 sump then pumped to storage tanks,

The waste acid is filtered through 2 diatomaceous earth pressure leaf filters  
then disposed via the injection well.

**IX. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (print or type)

W. G. Wiley, Jr., Vice President-Engineering


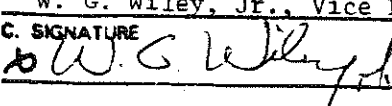
B. PHONE NO. (area code & no.)

C. SIGNATURE

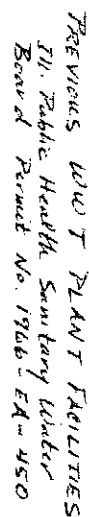
W. G. Wiley, Jr.

D. DATE SIGNED

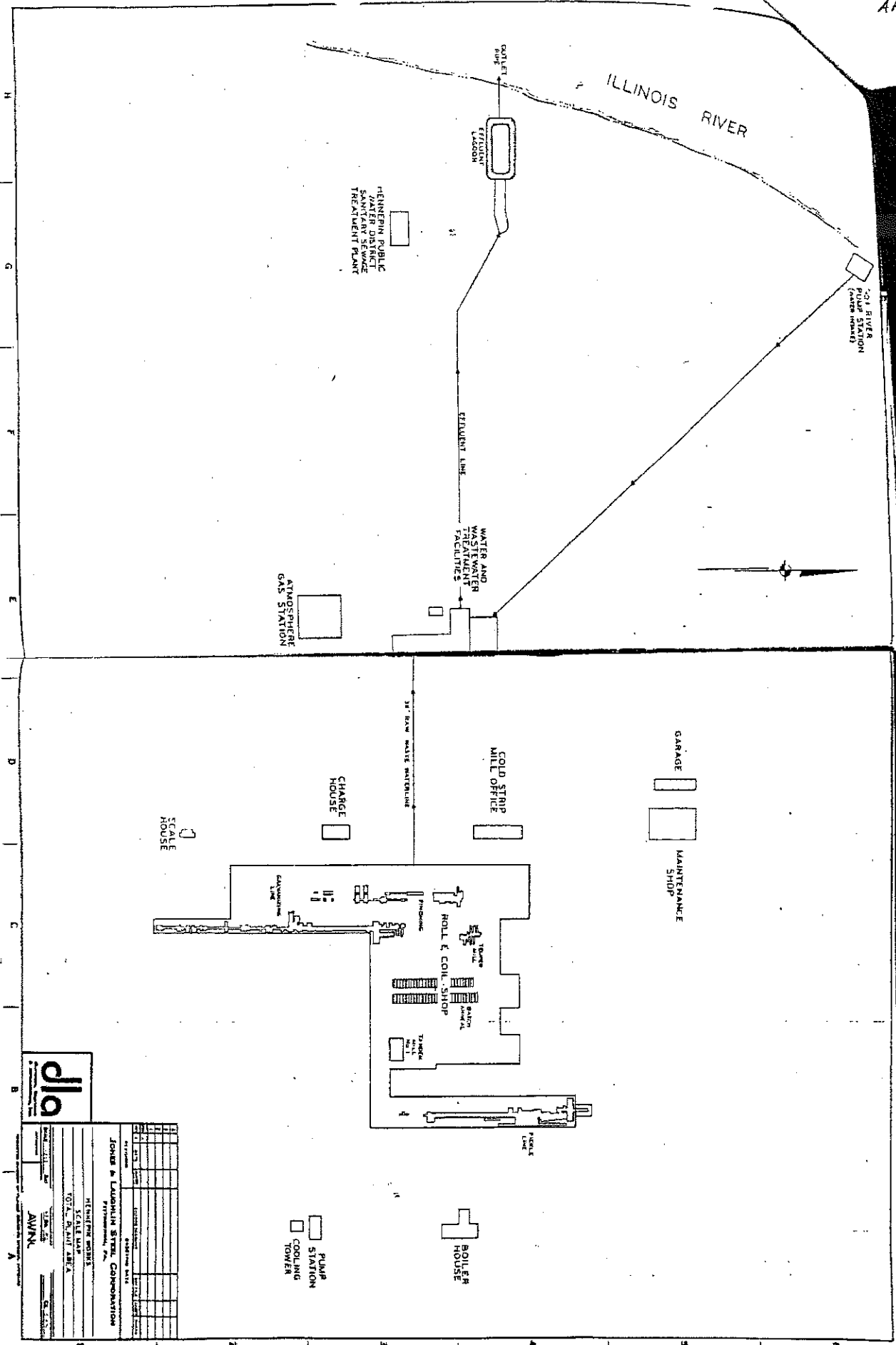
10 12-27-84

FORM  <b>4g</b>  UIC	 <b>IEPA</b>	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY <u>UNDERGROUND INJECTION CONTROL PERMIT APPLICATION</u> <b>PLUGGING and ABANDONMENT PROCEDURE</b>	I. US EPA I.D. NUMBER ILD000781591 II. IEPA I.D. NUMBER  
This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.			<b>FOR OFFICIAL USE ONLY</b> Received:     /     / Reviewed:     /     / Reviewer: Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Data request:     /     / Remarks:
<b>III. DESCRIPTION OF PLUGGING PROCEDURES</b>			
A. Abandonment during construction (specify subsurface well features to be removed and method for placement of plug(s)) Not applicable      			
1. Type and quantity of plugging materials at anticipated depth interval. depth interval (ft)     _____ type and grade     _____ additives     _____ viscosity of mud     _____ quantity (cu yd)     _____			
B. Abandonment after life of well(s) (specify subsurface well features to be removed and method for placement of plug(s)) <u>The injection tubing will be removed, decontaminated, and disposed properly. Epoxy resin cement will be placed in injection zone and the remaining casing filled in multiple stages using displacement method. Any displaced acid will be collected, properly treated and disposed. The casings will be cut 3' below grade and a steel plate welded across the top. Refer to Section 10.1 of the attached technical report.</u>  			
1. Type and quantity of plugging materials at anticipated depth interval depth interval (ft)     0-3066'     3066'-4868' type and grade     Class H     Resin Cement additives     _____ viscosity of mud     _____ quantity (cu yd)     _____			
<b>IV. CERTIFICATION</b>			
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and the based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.			
A. NAME & OFFICIAL TITLE (print or type) W. G. Wiley, Jr., Vice President-Engineering		B. PHONE NO. (area code & no.)  	
C. SIGNATURE 		D. DATE SIGNED 10-12-27-84	





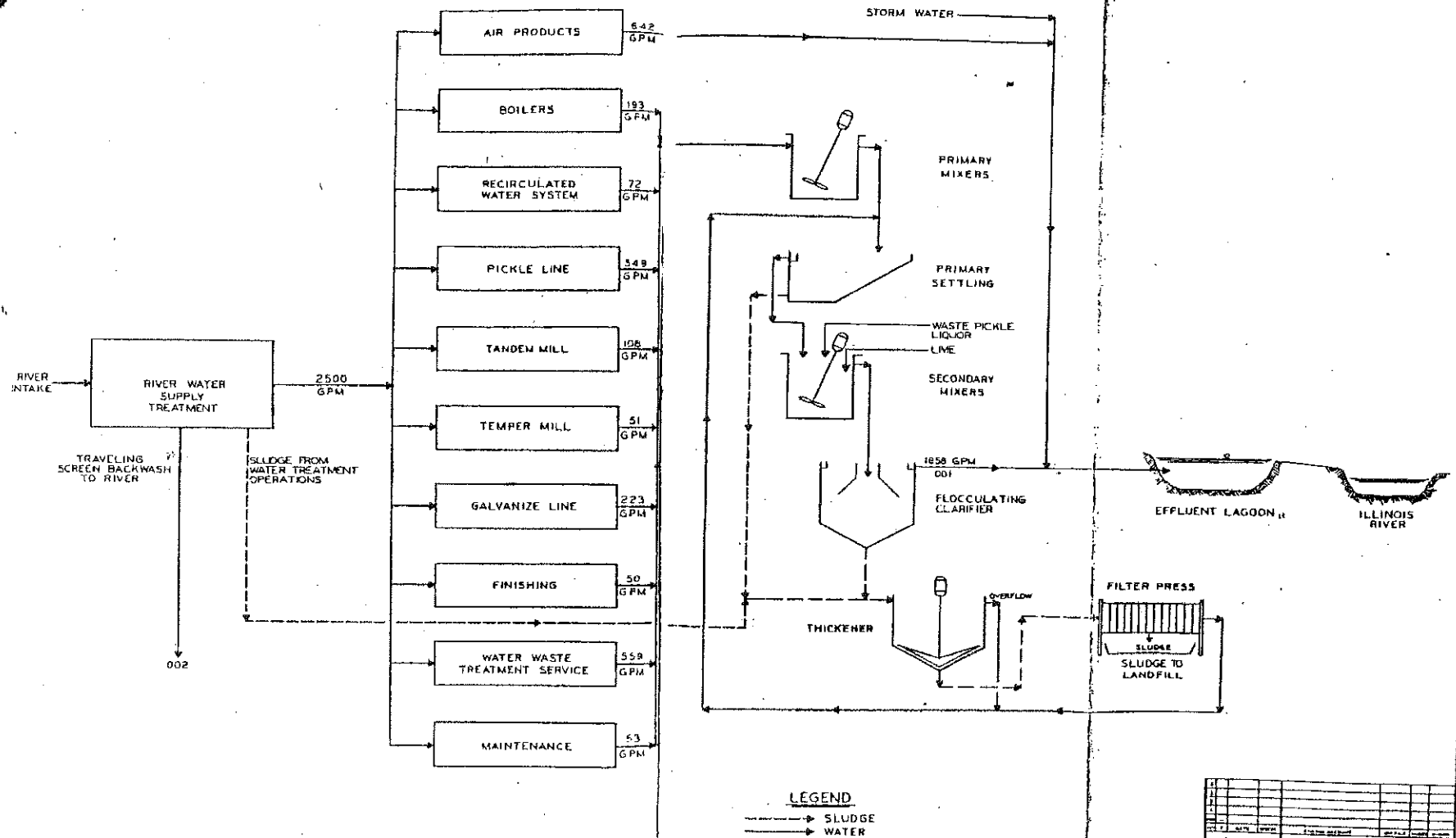
FMP - 1/2" L Steel  
Attachment E-26



ENDING WWI ACTIVITIES  
AT JOL STEEL CO.  
NPDES PERMIT # IL0002631

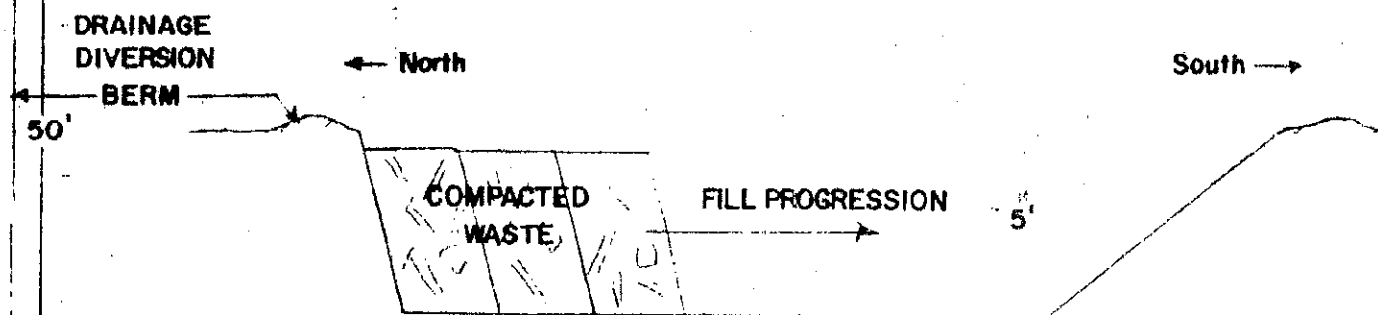
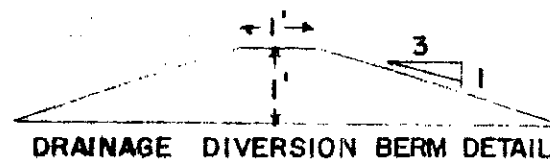
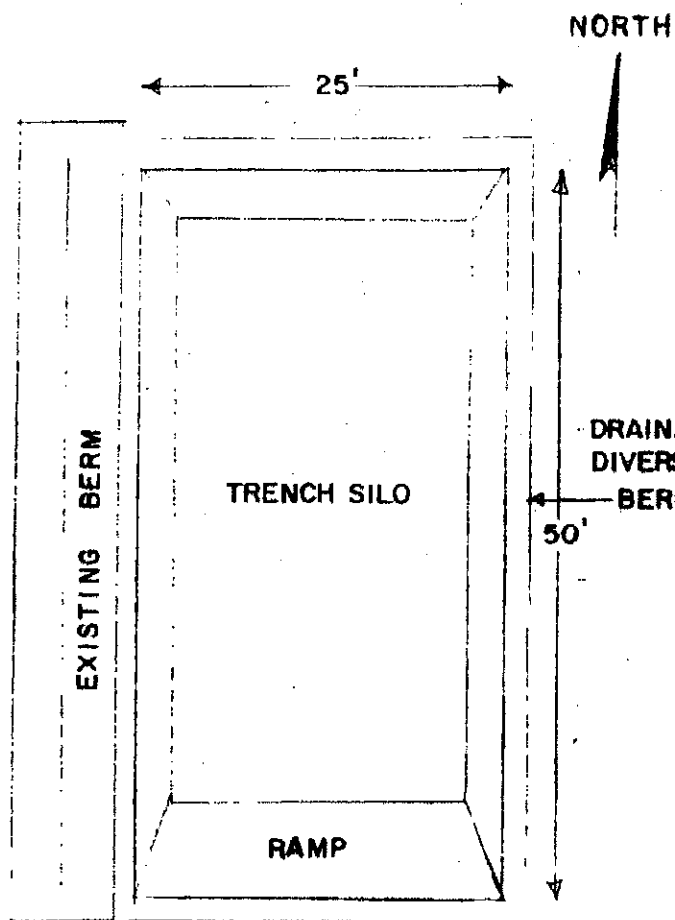
FMP - J.L. Steel  
Attachment E-2c

EXISTING WWT FACILITIES  
AT J.L. STEEL CO.  
NPDES PERMIT NO.  
IL0002631 22



DATE	BY	CHKD	DATE	BY	CHKD
PROJECT JONES & LAUGHLIN STEEL CORPORATION PITTSBURGH, PA. "EXISTING" WORKS FLOW SCHEMATIC					
DRAWING 2					





FILL TO BE REMOVED FOR FINAL DISPOSAL  
WHEN THERE IS APPROXIMATELY 200 CU. YDS.  
COVER AS NECESSARY TO PREVENT BLOWING  
LITTER.

# TRENCH SILO TRANSFER STATION (Temporary Storage Trench)

SCALE AS SHOWN

EPA PERMIT: 1980-8-0P-EX

FRP - 4 1/2 Steel  
Attachment E-2d

AM COUNTY

LPC

1552019

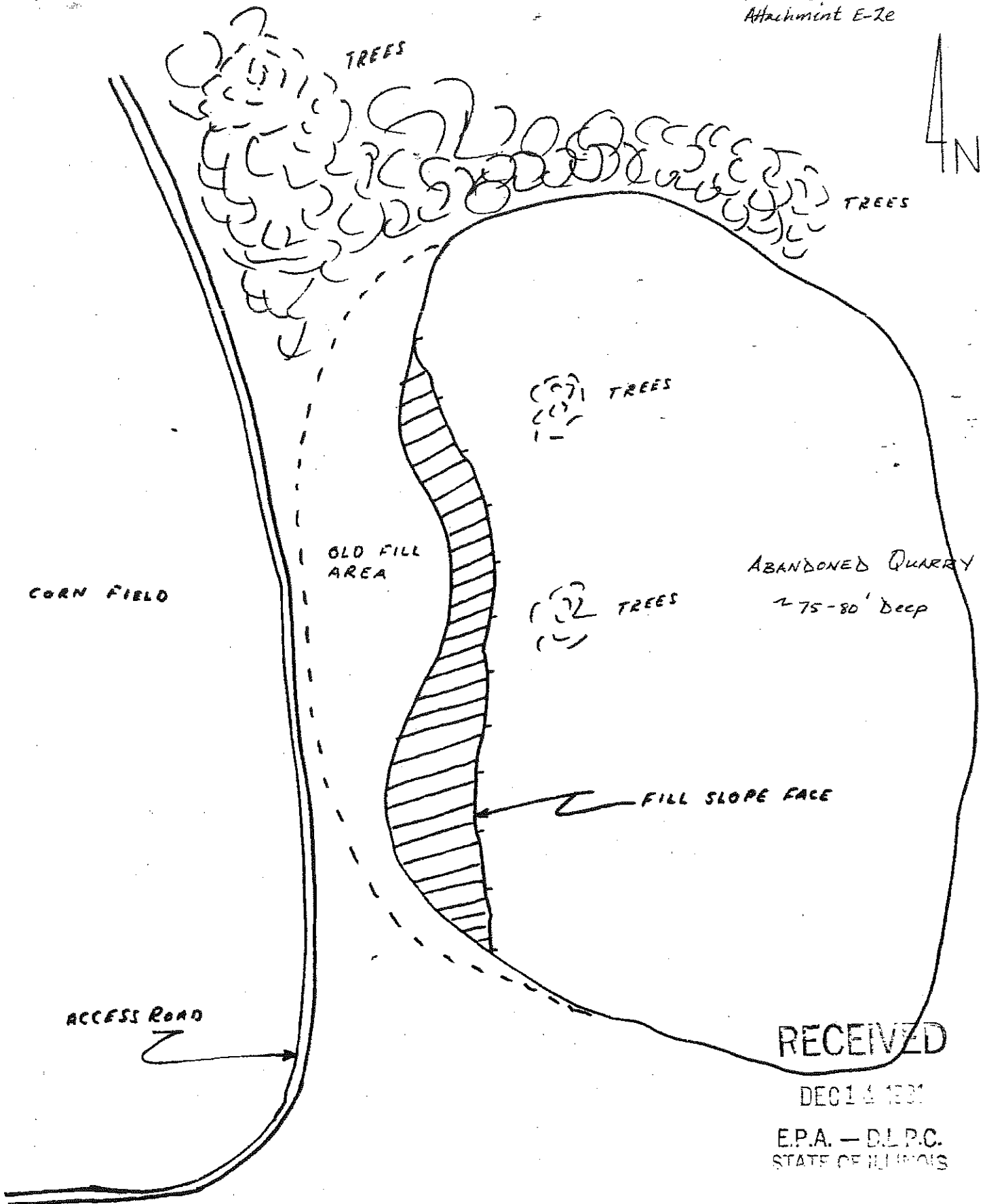
DATE: 12-02-81

TIME: 4:30 PM. To 5:00 AM.

FHP - J & L Steel  
Attachment E-2e

HENNEPIN

J & L STEEL CORP.



RECEIVED

DEC 14 1981

E.P.A. - D.L.P.C.  
STATE OF ILLINOIS

NOT TO SCALE

21

TABLE 2.0-1  
TYPICAL ANALYSES OF COMBINED WPL AND WASTE CHROMIC ACID  
HENNEPIN WORKS, ILLINOIS

	<u>mg/L</u>
Chromium (Cr)	13.7
Copper (Cu)	24.9
Lead (Pb)	0.4
Nickel (Ni)	19.6
Zinc (Zn)	2.8
Iron (Fe)	150,000
Chlorides (Cl)	250,000
Hydrochloric Acid, %	2.5
Specific Gravity	1.23

